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PRESIDENTIAL MESSAGE TO THE HOUSE OF DELEGATES OF THE MINNESOTA STATE MEDICAL ASSOCIATION

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A HEAVY responsibility and an unusual opportunity face me in reporting to you the current progress of our association and outlining a few of the problems we face.

Our association is well established and guided. If I were to imply that any member of this association would make an adequate president so long as its executive secretary, Mr. R. R. Rosell, Dr. L. L. Sogge and Mr. Manley Brist are at the helm, I would deprecate the fine work of the many preceding presidents and councilors who have been invaluable instrumentalities in its up-building. Your past presidents continue from year to year to attend the council meetings, often at personal sacrifice.

To men like Ben Souster and Bill Condit goes especial credit for careful accounting; and also, to L. A. Buie and his advisors, for judicious investment of funds. As we can see by the reports that are presented to us by our executive-secretary and his office personnel, we have a most efficient centralized administrative staff. As your president, I have observed it in the period of legislative bee-hiving and have the highest commendation for its co-operation and efficiency.

Our association has retained its essential democracy. As I have joined in deliberations of the councilors, it has occasionally impressed me that more direct decisions could be made by bypassing some of the time-consuming deliberations of committees. But these give all concerned a

chance to mold and devise the ultimate policies. The efficient plan whereby the various committees and subcommittees have been regrouped, provides a coherent court of continuous inquiry into the many essential details that comprise the ultimate purpose of our association. The chairmen of these various committees construe for the councilors the well-considered digest of judgment that ultimately becomes our policies. This is democracy in action.

Cancellation of Scientific Program

This is the first time in our history that we have been unable to hold an annual scientific session. We are most unfortunate because the program committee had arranged a brilliant session. Earlier in the year we had hoped that Washington might change its ruling and permit us to have a later session, but that hope is gone because our national transportation problem, with the war centering in the Far East, has become more critical than ever. As you know, Mr. Rosell had already arranged with many exhibitors for this annual session, and the income involved that we stand to lose might have made a greater difference had there not been built up, wisely and farsightedly, considerable invested funds.

Medicine Stands Well in Minnesota

We can all be justly proud of the high standards that our profession has set in Minnesota. Our association has maintained scientific sessions in connection with our annual meetings that are

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recognized for their excellence the country over. There is much evidence in the reports of our committees, which are well worth reading by every member, of the constructive efforts that our association puts forth to accomplish that which should be our common purpose: to promote the science and art of medicine and the betterment of public health.

Our association pioneered, back in 1939, in the field of disseminating and briefing the latest scientific information for our doctors by the institution of our subject-of-the-month packets, comprised of scientific papers prepared by experts on timely subjects. These have since been used as a model in other states. We have one of the finest state medical journals published within our country.

We shall have an opportunity, during this session, to hear the report of Dr. J. F. Du Bois, Secretary of the State Board of Medical Examiners, in which will be detailed what has been done to protect the profession and our own licensure by lessening within our state the menace of low grade medicine, cultism and quackery. The judicious service rendered by this Board in the essential field of keeping straight the records of those entitled to practice the healing art, and also keeping some of our own recalcitrant brethren from indulging in unethical and unworthy practices are worthy of much commendation. Likewise the efficient co-ordination of services that characterizes the State Board of Examiners in the Basic Sciences under the direction of Dr. J. C. McKinley deserves commendable mention.

Dr. A. J. Chesley, Secretary of the Minnesota State Board of Health, deserves much praise not only for his efficient handling of the public health problems of our state, but also for his fine spirit of co-operation with our medical profession.

Our Medical School at the University of Minnesota under Dr. Harold S. Diehl is one of the outstanding medical institutions in the country.

Our basic science law has become noteworthy throughout the United States and many inquiries come in for information as to its method of operation. For some seeking licensure here it may seem to work unnecessary hardship. As between some states, there perhaps should be more reciprocity. Without quarreling with the cults, our basic science law and its application has

helped to reform them and to rescue some such prospective devotees from the disasters of half-baked education.

Yes, medicine stands well in Minnesota, and we pledge our best efforts to retain its position and leadership.

Our Critics and Our Defense

Nevertheless, we are in a defensive position and our critics are numerous. You are too familiar with these matters of controversy and criticism to make detailed review necessary. Few of our critics claim that organized medicine has failed in its technical advances and accomplishments. Rather is criticism reflected in legislative action offered to overcome what are called inequities in distribution of medical service to certain groups of our population, and to spread the cost of illness by some prepayment plan for service, at least among low income groups.

Longer life spans, geriatric degenerative disorders, in contrast to pediatric control of communicable illnesses, and many other economic and social developments, have greatly altered our public and professional relationship.

The cost of medical and hospital care is a burden for many legitimately needing it and for countless others who think they do. Medical service is as popular as cars and refrigerators; it has not been rationed. Greatly overworked doctors and overloaded hospitals point up the background for calm readjustment and judicious legislative action.

In Minnesota, we are in the midst of meeting this issue along the lines of the several states already in the field. Dr. A. W. Adson and his committee deserve a great deal of credit for the splendid way in which they have grappled with the problem here. The last legislature gave us the desired Enabling Act and the Committee on Organization, which will be selected here before this House of Delegates session adjourns, will use all possible foresight to give us a forthright plan, definitely under the guidance of our profession.

Two Kinds of Critics

Before discussing that issue, however, permit me to call attention to the circumstance that, through all ages, medicine has had what we may call friendly, but caustic, critics: Voltaire, George Bernard Shaw, Leo Tolstoy—men of the greatest mental perception and understanding. Then we

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have the numerous garden variety of "potato bug" critics, speaking or writing from their peculiar personal assortment of emotional conflicts and personal ambitions. From recent experiences, I choose two illustrations: the one of the friendly and essentially reasonable critic; and the other, quite the reverse.

"A Delightfully Friendly Critic."—You all know who Charles Franklin Kettering of General Motors fame is. You hear him on many Sunday broadcasts during the intermission of the New York Philharmonic orchestra. You should think of him every time you start your car. He represents not only a delightfully friendly critic but he epitomizes that alertness, ingenuity and inventive genius which we now claim as a war-winning prerogative born of American genius.

At a recent meeting of the presidents of the seventeen North Central and Northeastern state medical societies and of the society of the District of Columbia summoned to Detroit to discuss pre-payment medical service plans, he retold, for our benefit, his splendid tale of adventure in bringing down from thirty-five days to two hours the time needed to completely paint an automobile. The story is too long to retell here, but in essence it had scores of poignant applications to the attitudes we assume toward fixed routines and, particularly, our development of objective methods for diagnosis and treatment—the part of medical service the public expects, loves and demands.

The regular paint people told him that he was crazy when he said that a reduction from thirty-five days to twenty-one in the painting of cars would be of no help at all in mass production. He clearly established his sanity when, with the aid of the Du Ponts, he modified a gadget maker's finishing fluid used in his small shop over in Jersey City to coat over some souvenirs, and they called it "duco."

But the point I particularly wish to make here is this: Kettering, some time previously, had a physical examination that required two weeks. He is convinced that largely through methods of instrumentation, electronic estimates of body fluids, et cetera, the period in which he hung around under the greatest of constraint and uncertainty might be reduced from two weeks to two hours! I am inclined to agree with him, if he would always present himself with some ailment or situation that is obviously organic, fairly well es-

tablished within his system, and can be ascertained to be the cause of whatsoever complaint harasses him at the moment.

It is evident that "Ket" is not at all familiar with that turmoil of the consciousness and that array of functional conflicts that are so much a part of modern medical practice and that are such an extraordinary source of the cost of medical service, because it is in that domain that so much of our energies is spent lest we overlook the early stages of cancer, or heart failure, or whatever it may happen to be.

Two months, not to say two hours, are inadequate to appraise, adjust or cure the psychoneurotics. I grant that they are distressed, and they will flood any and all hospital space available even as they do the veterans administration facilities. Ill-advised surgery abounds with these because many doctors refuse to believe that living sane, ethical, orderly lives is one essential for physiological serenity. Men like Kettering are in superb physiological and intellectual adjustment.

A Professional Propagandist.—For the other type of critic, I present some observations by Waldemar Kaempffert.* After lambasting the American Medical Association and calling loudly for reform of our guild, this author pulls out all the stops with outrageous demands that we shall accept bureaucratic grouping in some such form as *he* claims has worked out so admirably in Germany, Holland, Sweden and Great Britain. He states: "The A.M.A. has still to explain why some twelve million men in the armed forces are admittedly receiving the best medical and surgical care without benefit of free choice." He concedes, and is even willing to grant to the A.M.A., some credit for making our doctors the best in the world, but he overlooks how they attained that position, and proceeds to proclaim the advantages of what *he* observes in a visit to "the hospitals maintained by the Veterans' Bureau, by the Army and Navy, and by the states and municipalities."

He, with other emotional critics, believes that our vaunted individualism and the patient's right to seek the physician of his own choice is largely a menace to public health and efficiency. He puts it this way for his plan: "If such a system of public medicine were instituted, we should rely

*"What About it, Doctor?" *Tomorrow*, Vol. IV, p. 5, May, 1945.

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largely on medical centers of the type proposed by Surgeon General Parran, Senator Claude Pepper and others. By a 'medical center' is meant . . . an institution in which all the medical specialties are represented . . . where is available the pooled attention of half a dozen or more men, in which the proved diagnostic and therapeutic aids are found. That old wheeze 'medicine is an art as well as a science' would go by the board. We want less art and more science in medicine; more cardiograms and less chest thumping, and listening to internal swishes and gurgles; more urine analysis and blood chemistry and less divination; more x-ray examinations and less assumption that all is not well with the chest."

Here is a gesture by a professional propagandist, interested in something to write about that will challenge the eye of a surfeited reading public. Through it all runs the theme that it is so necessary for all of us to take to heart. We are in good part responsible for magnifying the objective in our examinations and of cultivating ineptitude in understanding the human consciousness. It is this potential abuse of the privilege of free or prepayment medical service that makes such plans financially hazardous and professionally unattractive.

State Versus National Prepayment Devisements

The success of the Blue Cross in providing prepayment hospital service has greatly increased the demand for similar methods covering medical costs of sickness. We were shown in Detroit how well the Michigan State Medical Society has co-ordinated a limited surgical and obstetrical service in hospitals with the Blue Cross in that state. The two acting agencies are separate and distinct but occupy the same office building.

Your president is indebted to the Michigan State Medical Society and its president, Dr. A. S. Brunk, for the opportunity to observe the well-co-ordinated functioning of the administrative staff handling this work. You will hear more and more about Michigan's plans; and those of other states are outlined and come in the mails each week. The A.M.A. is keeping in close touch with all of these and is building up a press and radio appeal to present the individual state's reactions to the new Wagner-Murray-Dingell bill. This voluminous document is very challenging.

The Journal of the American Medical Association urges all doctors to read it; a few will do so.

The Council on Medical Service and public Relations of the A.M.A. sends out an excellent "News letter." Dr. John H. Fitzgibbon, chairman of this committee, circularizes the various state offices with a leaflet with illustrated and animated cartoons bearing the title "Do not socialize your medical care."

Michigan is extremely anxious to expand a radio program, which it sponsors, in which the entire setup of the public presentation and broadcast is left to those skilled in that field. There is much to be said in favor of this approach. (At this writing, Dr. A. S. Brunk, in line with this objective, is repeating the Detroit program as it was given to the state presidents, to the Denver public relations conference, at the invitation of certain western states.)

We should keep in touch with these various state movements, because it is evident that, as Dr. Joseph S. Lawrence intimates, the national legislation contemplated is on such an extremely broad scale and implemented so closely with social uplift in general, that it is not likely that any of it will be rushed through on any war emergency basis. Dr. Lawrence has repeatedly averred, however, that it is essential, above all else, for the various states to keep in close touch with their congressmen and senators in Washington.

The Hospitals and Medical Practice

We face the following issues and developments in terms of hospitals:

1. More and more doctors' activities have come to center about hospitals, and the trend is rapidly increasing.
2. Most of the prepayment service plans are contingent upon registration in a hospital by the patient. Just before the war, the groups serviced by the Blue Cross found a hospital bed very acceptable under conditions that frequently were neither emergency nor "catastrophic" in the surgical sense in which that limited service is now planned. As coverage for medical fees is provided, the trek to available hospitals will be decidedly augmented. Inevitable abuse will be encountered and only the attending doctors are in a position to check it.

3. It follows that medical staff hospital organizations must be tighter and enter into what is

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rapidly becoming an integral part of our medical education program. But under this heading, I stress the problem of holding the staff member to a judicious use of hospital space and beds because "long stay" and unnecessary hospitalization will break down any prepayment plan. It remains to be seen whether "closed hospital staffs" as seen in our eastern states, or "wide open staffs" as obtains in our midwest may survive when the right of choice of physician is our first demand and where this same doctor is not provided a hospital staff appointment. This poses a difficult dilemma and points up the need of some farsighted adjustments. Where licensure to practice medicine is insufficient to entitle men to engage every privilege in a modern, highly-powered hospital, a degree of *intramural control and molding* is necessary for public safety.

4. At this juncture the United States Public Health enters the field with many plausible but injudicious plans for hospital space extension based all too much on wartime dislocations caused by the trekking of our population to war emergency plant concentrations, and by the subconscious undercurrent of military motion that builds roads where no one will ever use them and creates harbor facilities on the banks of dried up creeks.

There is a place for some of the hospital extensions as outlined in the Hill-Burton Bill, but as Dr. Haven Emerson has pointed out, all such ventures on the national level invite a surfeit in large population centers in order to build up to normalcy in sparsely settled and economically backward states.

This hospital bill is one of the many national drives at centralization and security that call for vigilant legislative molding and adaptation to give aid where it is actually needed.

A statewide survey is under way in Minnesota, undertaken by a Committee, appointed by Governor Thye, representative of the medical, hospital, nursing, dental and public health authorities the purpose of which will be to give a careful appraisal of existing hospital facilities and recommend such future expansion of facilities within the state as a careful review of circumstances would indicate.

So far our private hospitals seem able to plan their future on their own power.

5. A very great increase in Veterans Bureau

facilities is made necessary by the overwhelming number of sick and wounded destined to retain much morbidity and calling for complicated methods of rehabilitation. With nearly one-third of our population to be involved with the military personnel plans calling for extension of service to the families, certainly the veterans facilities should be brought closer and closer to home. It may be possible to handle a considerable portion of the veteran problem in our civilian hospitals.

6. Integrating our hospitals into the general medical educational problem: This development stems from the foregoing and may be analyzed under the following headings:

(a) Dr. Albert C. Furstenburg, Dean of the University of Michigan Medical School, has recently written that some 24,000 doctors now in military service will not return to civil practice. He estimates that 8,000 will be needed overseas; a like number, to service a much enlarged standing Army and active Navy; and 8,000 more for the expanding veterans facilities. To say that these figures are depressing in the extreme for those now in civilian practice and carrying the increased load of a public temporarily burdened with a fat purse, is to illustrate unusual understatement.

(b) This by-product of war is the ideal vehicle with which to impose upon our people and our profession a permanent bureaucratized panel system of medical practice such as came to England in the aftermath of the first world war. Our greatest current objective is to mobilize public support for our own far better state plans and the maintenance of a patient and physician relationship that has given our people the best service in the world. Our military forces in training and combat have had the same aggressive life-saving care, and let no one tell you that those brave men and women providing it came by their teaching and techniques in military camps and hospitals.

(c) Therefore, unless we are to become a fully and permanently militarized nation, we should preserve the system that has yielded so worthily up to date. This item concerns three conspicuous fields: (1) The men accepted for our medical schools: Just as soon as possible, more recruits for ultimate civil practice should be withheld from the selective draft and automatic training under the Army and Navy allotments. (2)

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Medical specialism has come to be as necessary as basic medical intramural study itself. The class A medical schools are capable in normal times of graduating all the recruits to medicine needed. They are able to provide but a small part of the facilities and faculties for the residencies and fellowships we now need. Our private hospitals, adequately equipped, and having a sufficient number of Special Board Diplomates on their staffs are able to augment the training schedules offered long and short term applicants for graduate training. These affiliations are already under way. A department of the A.M.A. is now carrying on official investigation through inspection of satisfactory hospitals; and the returning medical veterans will have financial aid in taking advantage of their opportunities. (3) Increasing numbers of the specially fitted new recruits under age 30 should be released from the military forces in order to staff these private hospital residencies and fellowships. Many veterans with family responsibilities and nearing 40 years of age are already too old to begin the toilsome apprenticeships leading up to the basic training now demanded of diplomate men. This must not be taken by the older men as a limiting affront. The great field of general practice is perhaps the most essential and worthy of all the specialties; and it is obvious that many veterans now indicating in their answers to questionnaires their desire to enter limited specialties must be drafted for general service as soon as possible. The geriatric cohorts are dying off.

The "Long Stay" Versus the "Short Stay" Patient

(d) One half of the total bed space in the United States and Canada caters to "long stay" patients; but the other half takes care of 93 per cent of the yearly registration. The "long stay" hospitals (insane, tuberculosis, epileptic and aged seniles) includes the veterans bureau facilities. Recall that they suggest the need of 8,000 more doctors to serve them.

A new General in command may make some difference in the veterans bureau medical setup, but fundamental factors are likely to suppress that medical initiative that induces the private physi-

cian to justify his selection by the patient. The veteran is not a charity patient. He has earned all and more than he will ever get in terms of his life dislocation. Many will go to the veterans hospitals daring the staff to cure them or trifle with their prerogatives.

Nothing has ever safeguarded the ward patients in our large general hospitals as much as their utilization for teaching purposes. No follower of Aesculapius is as zealous for the sick man's rights and needs as the qualified resident, properly apprenticed to a teacher endowed with a real human touch as well as a scientific mind. Yes, these bureau hospitals must be drawn into the medical teaching group.

The "short stay" patient will continue to yield the maximum inspiration; but the "long stay" provides many acute episodes and a leveling inhibition upon the recruits to the guild who have to learn that "doctors become more and more umpires and guides and less and less healers." Our brethren in all the "long stay" hospitals must be rescued from the blight of segregation and isolation.

The Mayo Memorial at the University

No movement in the last forty years has meant more for Minnesota medicine than the proposal to integrate and unify the facilities of our University hospital. We are well on the way to securing the needed appropriation. Your help in securing the legislative support and furthering the raising of the respective quota in your counties has yielded fine results. From now on we need to extend the pioneer work of graduate instruction as it has developed under the University and Dr. William A. O'Brien at the Coffman Continuation Center.

More funds for research and auditorium space for receiving larger study groups give the greatest promise for the future. It will become harder for competing institutions to draw our good teachers and research men away from us.

I hope you will carry back to your respective county committees raising the Memorial funds, the thanks of the Founders Committee; and that you will expedite the closing of the campaign.

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Minnesota Maternal Mortality Committee

THE study of all maternal deaths in Minnesota from July 1, 1941, to and including June 30, 1942, showed that twenty-six deaths were due to infection. The patients ranged in age from twenty to forty-six years, with the largest number being in the late thirties. The ratio of primigravidae to multigravidae was 8:18. Ten of these deaths occurred in the metropolitan centers of Minneapolis, Saint Paul and Duluth; the remaining sixteen were scattered through the rest of the state.

Your committee felt that eighteen of the twenty-six deaths were preventable and seven nonpreventable, while in one it was impossible to determine the preventability. The committee concluded that practically all of the preventable deaths were the responsibility of the attending physician.

Cause of Death

The cause of death was difficult to determine in many cases because of the paucity and unreliability of either hospital and/or physicians' records and infrequent or inadequate postmortem examinations. The latter is especially true in the rural communities. The causes of death are grouped as follows:

Abortion—11 deaths.

- Peritonitis (5).
- Septicemia (3).
- Tetanus.
- Pyemia.
- Septicemia (extra-genital infection).

Full or Near Full Term—15 deaths.

- Pulmonary embolism (7).
- Peritonitis (3).
- Puerperal sepsis (2).
- Mesenteric thrombosis.
- Septicemia with pneumonia.
- Septicemia (extragenital infection).

Abortions

Of the twenty-six deaths, eleven occurred in either the first or second trimester. These were due to a variety of causes which included pyemia following pelvic surgery during a puerperal infection associated with a spontaneous abortion at three months' gestation, septicemia and pulmonary

abscess following a uterine curettage in an infected abortion, and peritonitis due to an accidental perforation of the small bowel incident to pelvic surgery too soon after a spontaneous abortion followed by puerperal infection. One of the deaths was due to septicemia from extra-genital infection. A cellulitis of the chin was the primary site of infection. The chemotherapeutic attack was grossly inadequate and no sulfonamides blood levels were determined. The death was classed as probably preventable. Four of these abortions were self-induced and four spontaneous.

Of those self-induced, tetanus was the cause of death in one, peritonitis in two and probably peritonitis in the fourth.

In the spontaneous abortion group, peritonitis was the cause of death in two cases, pyemia and septicemia in one each. One of the deaths from peritonitis occurred in a sixteen-week pregnancy with a probable acute appendicitis. Laparotomy without drainage was done in spite of a frank peritonitis. In another, extensive pelvic surgery was done in the presence of puerperal infection. Errors in diagnosis and judgment were followed by a spread of what potential pelvic infection was present and death followed. In another, a uterine tampon was left *in situ* for a period of seventy-two hours followed by a subtotal hysterectomy, septicemia and death. The fourth death, previously mentioned, was one in which a uterine curettage was performed in the presence of an infected abortion.

There were two tubal pregnancies in both of which peritonitis was the cause of death. The operator did an incidental appendectomy in conjunction with the tubal surgery in both.

Full or Near-Full-Term Deaths

Fifteen deaths were included in this group.

One was due to septicemia of undetermined origin. This was probably an extra-genital infection and hypodermic injection was probably the portal of entry. It was impossible to determine either preventability or responsibility of death.

Of the remaining fourteen, pulmonary embolism was the cause of death in seven, peritonitis

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in four and septicemia or puerperal sepsis in the remaining three. Factors involved in the fourteen deaths are detailed as follows:

Cephalo-pelvic Disproportion.—Cephalo-pelvic disproportion was a factor in three of the fourteen deaths. The final picture varied but all three showed somewhat similar initial problems which included postmaturity, excessively large fetus (more than 10.5 pounds), long labor (60-120 hours), and/or difficult delivery with either completion of dilatation manually or desperate cesarean section. Death was due to peritonitis in one, to mesenteric thrombosis in one, and to thrombophlebitis and pulmonary embolism in the other.

The first patient, a primipara, who had had no pelvic mensuration, went into labor spontaneously after the forty-first week of pregnancy. After spontaneous rupture of the membranes and seven hours of hard labor the child was found to be presenting by the face. The consultant made a diagnosis of "questionable pelvis." A low cervical cesarean section was performed. On the second postoperative day the patient's temperature rose to 102° F. and pulse rate to 140. A diagnosis of peritonitis was made. In spite of adequate chemotherapy and blood transfusions the patient died the eighth postpartum day. One must assume that adequate pelvic mensuration and proper recognition of the disproportion before the onset of labor would have averted the necessity of the desperate operative delivery which led to the death of this patient.

Death in the second patient was due to a mesenteric thrombosis with gangrenous ileum and peritonitis. There was added shock due to manual dilatation of the cervix and podalic version on an excessive sized macerated fetus (10.5 lbs.). This followed medical induction of labor and a prolonged labor with premature rupture of membranes at 42.5 weeks' gestation. It is probable that early recognition of the cephalo-pelvic disproportion *before* the onset of labor, and delivery by elective cesarean section would have averted this catastrophe.

Death in the third patient of this group was due to pulmonary emboli due to thrombophlebitis following cesarean section with hysterectomy. This was done after 120 hours of labor which was complicated by intrapartum infection and cephalo-pelvic disproportion. Early recognition

of the disproportion and induction of labor at or even before term would probably have prevented this death.

Cesarean Section.—This procedure was done in five of the fourteen patients. Two were elective classical, one non-elective low cervical, and two were classical cesarean sections followed by hysterectomy.

In the elective classical group, one death was due to peritonitis eight days after the operative procedure. This patient had an acute upper respiratory infection prior to the operation which was done under general anesthesia. The post-operative course was complicated by peritonitis which became apparent on the third postoperative day. No chemotherapy was given until the day of death. Local anesthesia instead of general anesthesia undoubtedly would have been safer.

In the second case death was due to pulmonary embolism due to thrombophlebitis following elective cesarean section with multiple myomectomy for pre-eclampsia with possible superadded pyelonephritis at thirty-four weeks' gestation. The postoperative course was febrile with temperature rising to 105.6° on the third day. It gradually returned to normal and remained so on the eighth to tenth day. It then rose again from 99.2° to 100°. On the fourteenth day, while still febrile, she was allowed out of bed. This was followed by a fainting spell with a pulse rate of 156 and a temperature of 101° F. The blood pressure was 72/60. The patient had severe chest pain and cyanosis. Death followed on the fifteenth postoperative day. Autopsy revealed a pulmonary embolus and thrombosis of the left femoral vein. Criticism in this case is directed to the failure on the part of the attendants to recognize a continuing infectious process as evidenced by a return of fever. There is no justification for allowing the patient out of bed while still febrile.

The non-elective low cervical section was previously reviewed in the disproportion group.

Of the two classical sections followed by hysterectomy, one has been discussed under disproportion. The remaining death was due to pulmonary embolism fifteen days after operative delivery at term and twenty weeks after exploratory laparotomy complicated by postoperative thrombophlebitis. The patient was a forty-six-

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year-old primigravida whose menstrual periods have been normal but ceased about six months before her present illness. She consulted her physician because of an abdominal enlargement. An Aschheim-Zondek test is said to have been normal. On the twenty-second week of gestation she was subjected to a laparotomy and this revealed a normally pregnant uterus. On the twelfth postoperative day she experienced marked dyspnea on getting out of bed. A diagnosis of venous thrombosis in the right leg was made. She was discharged on the forty-fifth postoperative day. She progressed normally until term, at which time an elective classical section was done. Due to difficulty in closing the uterine wound because of the presence of myomata, a subtotal hysterectomy was performed. The postoperative course was normal until the sixteenth postoperative day when she collapsed after getting out of bed and expired about one hour later. No autopsy was obtained. The cause of death was believed to be pulmonary embolism due to sub-clinical thrombophlebitis. This death was classed as probably nonpreventable. In retrospect one can state that clinical or x-ray examination would have revealed the presence of a pregnancy at twenty-two weeks. Laparotomy would not have been done and perhaps the subsequent tragic events might not have occurred.

Exogenous Infection Deaths.—In this group were six cases in which the technique at delivery was probably the primary factor concerned in the cause of deaths. It would seem unnecessary to mention the need for sterile precautions at delivery, the recognition of the presentation of the fetus and the usual conservative management of the infected postpartum patient. However, the need for re-emphasis of sound obstetrical procedures is evident in the review of the following deaths.

1. *Breech delivery in the home.*—This patient was a para 10. Without sterile precautions, a difficult delivery of a large fetus presenting by the breech was carried out. This was followed by an excessive loss of blood. This patient was unco-operative and got out of bed on the third postpartum day. Death from puerperal sepsis occurred on the twenty-ninth day. The physician and the patient must each assume a share of the responsibility.

2. *Pulmonary embolism and thrombophlebitis.*—This patient was a para 1 and at term. She was delivered by an apparently easy outlet forceps after six hours of labor. Because of profuse bleeding in the third stage and also because the placenta could not be delivered, a manual removal of the placenta was done an hour and a half later. From the first to ninth postpartum days her temperature fluctuated from 99.4° to 101° and her pulse ranged from 80 to 120 with a hemoglobin reading of 35 per cent. Because of continued and increased bleeding a dilatation and curettage was done on the ninth postpartum day. She developed a thrombophlebitis in her left leg and although still febrile with a temperature of 100.4°, she was discharged from the hospital on the sixteenth postpartum day. Death was due to pulmonary embolism due to thrombophlebitis.

3. *Septicemia with pneumonia and uremia.*—This patient was a forty-one-year-old primipara who received practically no prenatal care in spite of monthly routine visits to her physician. No pelvic measurements were made. No blood Wassermann was taken. No determination of her hemoglobin was done. There were no routine urinalyses, blood pressure determinations, abdominal palpations, or even weight measurements. She fell into labor spontaneously in her thirty-ninth week of pregnancy. After about eight hours of labor her blood pressure ranged from 170/90 to 190/100, and albuminuria was present. The first stage lasted for more than seventeen hours and because of no progress in the second stage, a total of 9 minimis of pituitrin was given intramuscularly within one hour and forty-five minutes. Delivery was finally accomplished after twenty-one hours of labor by outlet forceps extraction. On her second postpartum day her temperature rose to more than 102° F. and continued at about that level. She had abdominal tenderness and distention which persisted. On the sixth postpartum day the first laboratory studies showed a hemoglobin of 80 per cent, white blood cells, 54,000, blood urea nitrogen, 220 mgm. per cent. She became restless, irrational, and died on the seventh postpartum day. Death was due to septicemia with pneumonia and uremia.

4. *Pulmonary embolism due to puerperal sepsis.*—This patient was a para 2 who went into

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labor at the thirty-ninth week of pregnancy. Uterine contractions ceased and membranes ruptured after six and one-half hours of labor. Without any determination of either fetal position or presentation and without any knowledge of the condition of the cervix, a total of 9 minims of pituitrin was given during a period of twenty-eight minutes. Strong pains resulted and a sterile vaginal examination revealed a transverse presentation with prolapse of an arm. With difficulty, the prolapsed arm was replaced and a podalic version was done. Sulfathiazole in 1 gm. doses was given every four hours for the next six days. The pulse rate remained below 100 and the temperature at about 99°F., until the ninth postpartum day when the pulse rate increased to 110 and the temperature rose to 99.6°. On this day she was allowed out of bed. On the following day, as she got out of bed to go home, she suddenly complained of faintness, dizziness, and substernal pain. She became cyanotic and died within a few minutes. Autopsy revealed a large embolus involving both branches of the pulmonary artery. This death was classed as non-preventable.

5. *Pulmonary embolism following puerperal sepsis.*—This patient, a para 1 at term, was delivered spontaneously without sterile precautions at home after a two-hour labor. All information was obtained from the physician's memory and the full story of her postpartum history was not complete. However, it was stated that she was well until the tenth postpartum day when she complained of a severe chest pain. The temperature rose to 102° and she expectorated bloody sputum. She received apparently adequate sulfonamide therapy and the temperature returned to normal. Apparently she remained in bed and on the twenty-seventh day, while receiving her morning bath, she expired suddenly. Autopsy was not obtained. The cause of death was believed to be pulmonary embolism due to puerperal infection. This death was classified as probably non-preventable.

6. *Questionable pulmonary embolism due to thrombophlebitis.*—Both hospital and office records were incomplete and most of the information was obtained from the physician's memory. This patient was a para 7, apparently at term. A questionably sterile vaginal examination in bed was

done to determine the course of labor. After approximately fifteen hours of labor, delivery was effected by low forceps. Except for a temperature rise to 100.4° eight hours after delivery she was afebrile and had no complaints until the seventh postpartum day at which time she experienced very sudden pain in her right thorax. Her temperature rose to 99.2° and pulse to 92. She was given 135 gr. sulfanilamide in the next five days. She is said to have been in good condition and to have felt well until the morning of the fourteenth postpartum day when she suddenly became dyspneic, cyanotic and died within ten minutes. Autopsy was not done. The cause of death was probably pulmonary embolism due to puerperal thrombophlebitis. This death was classified as probably nonpreventable.

Remaining Deaths.—

1. *Probably puerperal sepsis* possibly with myocarditis and/or toxic hepatitis from sulfanilamide. Both office and hospital records were so incomplete that no definite statements regarding preventability or cause of death could be made with any degree of certainty.

2. *Peritonitis* with terminal pneumonia due to small bowel obstruction from postoperative adhesions. Conservative therapy was carried out for nine days, followed by surgical release of adhesions and spontaneous labor at twenty-eight weeks' gestation. This was really a nonobstetrical death.

Lessons Which May Be Learned From a Study of the Maternal Deaths Due to Infection

For purposes of study, deaths due to infections can be divided into three periods, prenatal, labor and delivery, and the postpartum period.

Prenatal Care.—The need for continued emphasis on adequate prenatal care is seen by the study of these deaths. Only 1.8 per cent of all patients who died in Minnesota during the year received even minimum adequate prenatal care.

The minimum requirements of adequate prenatal care as set up by this committee were as follows:

1. Adequate history and general physical examination.
2. Pelvimetry to include measurement of the antero-posterior diameter of the pelvic inlet, palpation of the sacrum, and intertuberous diameter of the outlet.

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3. Blood Wassermann.
4. Blood pressure determination.
5. Urinalysis.
6. Weight determination.
7. Abdominal palpation in the last two months of pregnancy.
8. Reasonably adequate study of abnormalities presenting themselves during these visits.

The detailed study reveals a definite lack of proper prenatal care in many instances. No pelvic mensuration, blood Wassermann, abdominal palpation, hemoglobin, weight determination or routine urinalysis was done in one patient. It is easy to demonstrate that such crude medical care is the cause of a large proportion of maternal deaths.

Another factor was the improper evaluation of the status of the fetus in relation to the size of the mother's pelvis. An attempt should be made to individualize each patient in an estimation of the weight and size of the fetus and the probability of this particular fetus to engage and pass through this particular pelvis. In cephalo-pelvis disproportion this is particularly true. In questionable pelvis, and particularly in these with mid-pelvic contractions, x-ray pelvimetry should be done before the onset of labor.

Previous obstetrical history is another factor which merits mention. In two instances death might have been prevented by elective cesarean section. There was a history in one of two long labors resulting in the delivery of stillborn infants and yet this patient was allowed to go into labor again. Dystocia again was encountered, leading to manual cervical dilation, operative delivery, followed by thrombophlebitis and death due to pulmonary embolism.

The role of the patient in regard to prenatal care is an important one, yet in three of the patients who died, the patient did not visit a physician at any time for such care. In two instances, sexual relations in the last week of pregnancy were possibly factors in causing the infectious episodes that followed delivery.

Labor and Delivery.—In the general summary it was shown that patients who died too often received inadequate care during labor and delivery. Study of the conduct of labor revealed the fact that many vaginal examinations were done under questionably sterile precautions. Vaginal

examination of the patient in bed was done in five instances. In two operative deliveries there was a decided lack of preparation of the patient for the surgical procedure. In one no blood examination was done before operation. In another a cesarean section was done in spite of a hemoglobin of 49 per cent and the patient did not receive additional supportive measures in the forms of blood transfusions.

Another factor in delivery was the choice of anesthetic. General anesthesia was employed in the great majority. Its use in two patients with pulmonary disease was undoubtedly a causative factor in their deaths. In the five cesarean section deaths, ethylene, ethylene and ether (two), spinal and ethylene, and spinal anesthesia were used. The infrequent use of the safer local anesthesia is to be deplored.

Postpartum Care.—In the general summary it is shown that adequate postpartum care was given to only 3.5 per cent of the patients who died.

The chemotherapeutic attack in most of the patients was not fully utilized. Either an underdose of sulfonamides was given, or the choice of the particular sulfa compound was not the wisest. Sulfanilamide was given in many instances where either sulfathiazole or sulfadiazine would have been more effective. There were very few estimations of the blood levels of the sulfonamides. As a result the full and safe therapeutic attack could not be assured.

Although bacteriological studies should always be done in puerperal sepsis, the drug should be administered early without waiting for culture reports. Most severe puerperal sepsis is due to the hemolytic streptococcus, and early and effective chemotherapy should be instituted.

According to Sinykin at the University of Minnesota Hospitals, sulfadiazine has become the drug of choice for almost all obstetric infections. It is rapidly absorbed and slowly excreted and shows very little evidence of toxicity. This allows a rapid rise in blood concentration of the drug and maintenance of the desired blood level with less frequent dosage. For the ordinary adult patient 2 or 3 grams of sulfadiazine and 4 grams of sodium bicarbonate are given as an initial dose. Thereafter, 1 gram of sulfadiazine and 4 grams of sodium bicarbonate are given every six hours. This will usually produce blood levels of the

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drug of 6 to 8 milligrams per cent. Severe infections may on occasion justify pushing the blood concentration to higher levels. When the drug cannot be taken or retained by mouth, sodium sulfadiazine may be given intravenously or subcutaneously. For intravenous use, 3 grams of sodium sulfadiazine may be given as a 0.5 per cent solution in physiological saline. One gram should be given similarly every six to eight hours. Similar doses may be used subcutaneously in a 1 per cent to 2 per cent concentration.

Since sulfathiazole and sulfadiazine are poorly soluble in water, sufficient fluid must be administered to produce a measured urinary output of at least 1,000 c.c. in twenty-four hours.

At present there seems to be little justification for the use of the other sulfonamides in purely obstetric infections. Sulfathiazole is useful in some staphylococcus infections as puerperal mastitis and staphylococcal infections of the urinary tract.

Penicillin is now taking its place as even more effective than the sulfonamides. In severe puerperal infection, this may be given in dosages of 1,500 to 20,000 units every two to three hours for the first twenty-four hours and subsequently in dosages of 10,000 to 15,000 units every three hours. This therapy may be combined with sulfadiazine therapy as detailed above.

The general principle in the therapy of a severe puerperal sepsis involves the assumption that it is caused by the aerobic hemolytic streptococcus most often and the staphylococcus less often. Early and extremely active chemotherapy adequately controlled is essential. The anaerobic streptococcus of thrombophlebitis is unlikely to be affected.

The treatment of thrombophlebitis is primarily prophylactic. However, when thrombophlebitis does occur, extreme conservatism in treatment

should be employed. Rest and elevation of the affected part and preferably dry heat, should be used if the lower extremities are involved. Too much emphasis cannot be placed on conservative treatment. Elevation of temperature above the normal without other explanation should make one suspicious of hidden active thrombophlebitis. Continued rest in bed and elevation of the affected limbs should be used as long as slight temperature elevations are present.

Dicoumarin and heparin have given encouraging results in the prevention and treatment of thrombophlebitis and pulmonary embolism. This is particularly true in those patients who have previously had known thrombophlebitis and in whom prophylaxis is required.

Two deaths detailed in this study might well have been prevented if more conservative measures had been employed. These patients were allowed out of bed with elevated temperatures of 99.6° to 100° and increase in pulse rates to 96 and 110. The tragic sequel was pulmonary embolism.

Comments

Maternal mortality throughout the United States has been definitely decreased in the past five years. Maternal mortality in Minnesota has followed this trend. Hemorrhage and infection are still the most important causes of maternal deaths. Such factors as increase in hospitalization of the patient, the wider use of chemotherapeutic drugs and the increase in prenatal care have played a large part in this reduction of maternal deaths. Sound obstetric practice, however, is of paramount importance. Proper obstetric procedure and the adequate employment of the newer chemotherapeutic drugs will reduce the maternal deaths due to infection and aid the medical profession of Minnesota to reach their goal of less than one maternal death for every thousand live births.

FREE DRESSINGS

The Minnesota Cancer Society has a supply of surgical dressings which they would like to give to patients needing such dressings. Cancer patients, as well as any other patients needing such dressings, may have them.

The dressings, which are unsterile, are made of soft white material with a cellulose filling in sizes 8 by 8 inches and 8 by 12 inches. Bandages in widths from 1

to 4 inches are also available. The dressings are made by various groups and organizations throughout the State so there will be a continuous supply.

Physicians may obtain them for their patients by writing, or having their patients write, to the Minnesota Cancer Society, 362 Lowry Medical Arts Building, St. Paul, Minnesota. In some counties, the County Nurse keeps a supply of these dressings. There is no charge for the dressings or for postage.

THE COLONNA RECONSTRUCTION OPERATION FOR UNUNITED FRACTURES OF THE NECK OF THE FEMUR

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and

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THE large majority of patients with ununited fractures of the neck of the femur are elderly. Consequently, operation should be undertaken only after careful examination and consideration of their fitness. Age in itself is no contraindication.

The fundamental lack in these patients is skeletal support and a number of operations have been devised to provide such support. The neck of the femur normally is at an angle of 127 degrees with the shaft and when an ununited fracture exists and weight-bearing is attempted, the lower fragment tends to slip upward and the body weight is carried only by the capsule and such fibrous union as may have formed. Very seldom is the fibrous union of sufficient strength to enable the patient to get about without support.

Conditions at the site of fracture pretty well determine the type of surgical procedure to be performed. If the head of the femur is viable and a fair amount of the neck of the femur remains, some form of bone grafting should be considered.⁵⁻⁷ If the head is viable but the neck has been absorbed the Brackett operation⁸ or some modification of it should be used. These operations, which re-establish bony continuity of the head and the shaft of the femur, in many instances have been followed by full restoration of function.

Even if union is secured in a case in which the head of the femur is dead, it will atrophy and wear away under use, resulting in a painful and stiff joint. With such an atrophic head present, one of the so-called reconstructive operations is indicated. Two operations of this type with the common basic feature of removal of the head of the femur are the Whitman⁹ and the Colonna.¹⁻⁴ In this paper we propose to call attention to the

Colonna procedure (Fig. 1), emphasizing (1) the type of case best suited for it, (2) technique, (3) postoperative care and (4) results.

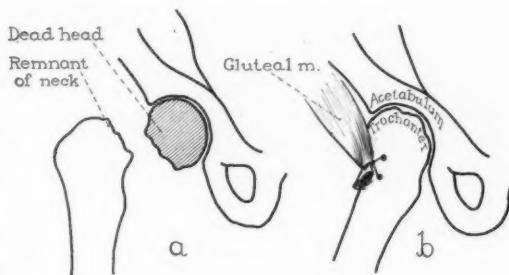


Fig. 1. a. Diagrammatic representation of conditions; b, dead head excised and trochanter put in acetabulum to re-establish skeletal support. Gluteal muscles fastened at lower level.

Type of Case

It is not always possible to tell definitely from roentgenograms whether the head of a femur is viable or dead. If it is dead, the blood supply is lacking and the head in the roentgenogram casts a denser shadow than does the normal head and the contour is likely to be irregular. It is in the cases in which the blood supply is fair that difficulty arises in determining just how good the head is. Only by actual inspection of the head at the time of operation can a definite decision be made. If the head is yellowish and the cartilage is thin and if bleeding from the bone is absent or is slight and patchy when the fractured surface is exposed and freshened, it can be assumed to be dead. In this type of case the Colonna operation is useful.

Operative Technique

In 1935, Colonna¹ published a paper entitled "A new type of reconstruction operation for old ununited fracture of the neck of the femur." He reported six cases, the youngest patient being forty-eight years of age and the oldest, seventy. Four were females and two were males. He

Since this paper was written, Dr. Hinckley, formerly a Fellow in Orthopedic Surgery, Mayo Foundation, has joined the armed services and is now Lieutenant (jg), Medical Corps, United States Naval Reserve.

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stated that this type of reconstruction operation was designed primarily for those cases in which nonunion was accompanied by complete absorption of the femoral neck. His operation was designed not only to secure stability in an advanced type of ununited fracture but also to produce a satisfactory range of movement in all directions and to lengthen the shortened extremity.

Colonna used an anterior straight incision, exposed the greater trochanter and carefully cut away the muscles close to their insertion into the trochanter. He then opened the capsule and removed the head of the femur and also inspected the surface of the femur to see if any remnant or spicules of the neck of the femur remained. If so, they were chiseled off flush with the inner surface of the shaft. After the greater trochanter was completely freed of all its muscle attachments, the leg could easily be pulled down and the trochanter placed deeply within the acetabulum, holding the hip in 20 degrees of abduction and fully extended. The capsule and abductor muscle then were pulled down together and fastened down over the trochanter into a bony trough which had been made in the lateral aspect of the shaft of the femur at about the junction of the base of the trochanter with the shaft. He cautioned that the leg should be held in such a position that the patella looked directly forward. The fibers of the vastus lateralis were sewed back over the area where the abductor muscles were fastened to the shaft. He then placed the patient in a long plaster spica cast applied from the toes to the axilla with the limb in about 20 degrees of abduction and complete extension. In four weeks the plaster was bivalved and active and passive movements were begun.

The rules laid down by Colonna should be followed closely, particular care being taken to fasten the abductor muscles low enough to insure proper tension and to see that at least 20 degrees of abduction of the hip is maintained and that the patella looks directly forward and the foot is not inverted. If the leg and foot are allowed to rotate inward a troublesome toeing-in ensues.

Postoperative Care

For fixation we prefer to use a double plaster-of-Paris cast extending from the thoracic mar-

gin to the knee on the sound side and to the toes on the affected side rather than the single spica as advised by Colonna. We bivalve the cast two or three weeks after the operation and by aid of a sling beneath the knee attached to an overhead rod and pulleys, have the patient flex the knee and so the hip. Abduction, however, must be maintained for about six weeks. This is accomplished by keeping the patient in the posterior half of the spica cast. Then the patient is allowed up on crutches and moderate weight bearing is permitted as soon as he feels so inclined.

Results

Between 1935 and 1944, inclusive, twenty-five patients who had ununited fractures of the neck of the femur were operated on by the Colonna method. Twenty-three were females and two were males. Their ages ranged from sixteen to seventy-three years. Classified according to decades they were divided as follows: There was one patient in the second decade, two patients in the fifth decade, four in the sixth, fifteen in the seventh and three in the eighth.

It is difficult to evaluate end results in operations of this kind on elderly patients. Age slows up many people. Some maintain their alertness and muscular co-ordination much better than others. Some loss of motion of the hip always results. One cannot expect a normal hip joint when the head of the femur is removed. For classification of our results we establish four divisions: excellent, good, fair and poor.

When the patient could walk with no support, was able to put on his shoe and stocking unaided and had no pain, the result was classified as excellent. The result was considered good if the patient walked with the aid of a cane but could get about the house without the cane in reasonable comfort, was able to put on his shoe and stocking without assistance and had no pain. The result was classified as fair if the patient always walked with some support, cane or crutch, was unable to put on his shoe and stocking without assistance, had a moderate amount of pain but was really improved over the condition prior to operation. The result was regarded as poor when the patient walked with support, was unable to put on his shoe and stocking unaided, was hav-

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ing pain and seemed no better than he had been before the surgical procedure.

At the time of preparation of this report, sufficient time (at least eighteen months) had elapsed

poor results varied from sixty-four to seventy-three, with an average of sixty-eight.

The length of time that the nonunion had existed prior to operation varied in the different

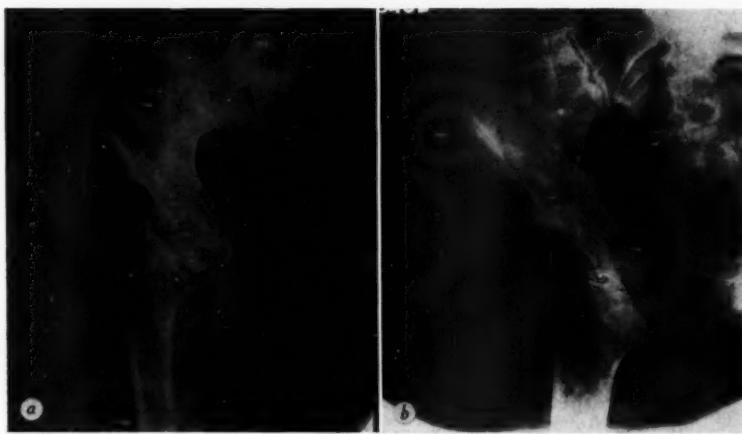


Fig. 2. Roentgenograms in case of a forty-one-year-old teacher; *a*, July 25, 1945, nonunion of twenty months' duration, with atrophic dead head and absorption of most of neck; *b*, September 5, 1935, after operation; trochanter in acetabulum. Ten years after operation patient is able to walk without the aid of crutch or cane and to put on shoe and stocking without difficulty. She is able to carry on with her teaching activities.

in twenty-two cases to determine with reasonable accuracy the end result. In seven cases the result could be classified as excellent, in five cases as good, in five as fair and in five as poor.

As might be expected, on the whole the younger patients obtained better results than the older ones. The ages of the patients classed as having excellent results ranged from forty-one to sixty-two, with an average of fifty-five.

The ages of those having good results varied from sixteen to sixty-nine, with an average age of fifty-five. The sixteen-year-old patient was a boy who had sustained a fracture of the neck of the femur while skiing. He was operated on at his home and a Smith-Petersen nail inserted. Sepsis followed with breakdown of the fracture with necrosis and loss of the head of the femur. We saw him twenty-seven months after the accident and performed a Colonna operation to give skeletal support. In so far as skeletal support is concerned the result is excellent but motion is sufficiently limited so that the result was classified only as good.

The ages of those who obtained fair results ranged from fifty-nine to sixty-eight, with an average of sixty-six. The ages of those who had

groups. In the group in which the result was considered excellent, the time varied from nine to thirty months, with an average of seventeen months. In the group of patients who had a good result, it varied from eleven to forty-four months, with an average of twenty-eight months. In the group of patients with fair results it varied from four to sixty-five months, with an average of twenty-nine months. In the group of patients with poor results it varied from two months to thirty-five months, with an average of seventeen months. Strange to say, the sixty-five year old woman who had only a two months' history had most marked nonunion with practically complete absorption of the neck.

There were no deaths or serious complications of any sort in this series.

Conclusions

1. The Colonna operation for ununited fracture of the neck of the femur should not be used in cases in which the patient has a live, movable head. With such conditions existing, our preference is for the bone graft (when sufficient neck of the femur remains) or the Brackett operation if the neck is largely absorbed.

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2. The Colonna operation is suited for those cases of ununited fracture of the neck of the femur complicated by a dead or partially dead atrophic head of the femur with marked absorption of the femoral neck.

3. In view of the serious disability that elderly patients have as a result of ununited fractures, the fact that of twenty-two cases, seven showed excellent results and five good results after a period of at least eighteen months after operation establishes the operation as a useful procedure.

4. In general, the younger the patient and the shorter the duration of the nonunion, the more favorable the result (Fig. 2a and b).

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RETROPHARYNGEAL ABSCESS AND MASSIVE HEMORRHAGE

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THERE are few complications in the field of otolaryngology which are so perplexing and tragic as a massive hemorrhage from the throat. Such a hemorrhage is usually most unforeseen and unexpected by the attending physician and in most cases fatal to the patient. Textbooks in the main make very little reference to this grave complication, but from the literature and personal communications of colleagues one is surprised to discover a great many cases have never been reported. An analysis of all these cases would undoubtedly afford most valuable data for the future guidance. This consideration prompts me to present the following case.

A female child two years old was admitted to the University of Minnesota Hospital on April 17, 1944. The following history was obtained from the child's mother: nearly all the members of the family had flu and sore throats prior to the patient's admission; the patient herself became ill on April 5 with fever and anorexia; a few days later her neck became stiff and swollen on the left side. These symptoms lasted for one week with a temperature up to 104°. On April 13 the temperature became normal; she tried to eat, but her throat hurt her; the following days she played outside, was cheerful, but always complained of pains when she tried to eat. On April 15, ten days after the onset of her illness, she woke up vomiting about a half cupful of fresh blood. Half an hour later she vomited another half cup of blood. The local physician was called, but could not come; he ordered cold packs to the stomach and to withhold food. Two hours later she vomited again a small amount of brownish material. For the rest

of the day she felt well and wanted to eat; she slept well that night. The following day she was also cheerful, had no complaints until 6 p.m. when, after eating milk toast, she again vomited up a full cup of fresh blood. This happened intermittently all night. In the morning the child was very weak, listless and extremely pale.

On the advice of the local physician the parent brought the child that morning to the University of Minnesota Hospital, where she was admitted to the pediatric department. On arrival at the pediatric ward she again vomited a large amount of blood; immediately the department of otolaryngology was asked for consultation. When we saw the child, which was very soon after her admittance, she was in extreme shock, very pale, listless, the pulse rate 150, thready; the hemoglobin was 22 per cent. On examination of the throat a mass the size of a small egg was seen at the left lateral pharyngeal wall; its surface was smooth, its color bluish. In the center of this mass a small opening could be noticed from which a blood clot was protruding. The lymph nodes on the left side of the neck were markedly swollen. The history and clinical findings left no doubt that we were dealing with a retropharyngeal (parapharyngeal) abscess which had eroded one of the big blood vessels, in all probability the left internal carotid artery. The patient was immediately brought to the operating room. Under ether anesthesia the left common carotid artery was exposed and ligated. Inflamed enlarged lymph nodes surrounded the sheath of the large blood vessels but no hematoma or free pus was encountered.

No further bleeding occurred. The child received several blood transfusions. There was no cerebral complication whatever. She made an uneventful recovery and left the hospital ten days after the operation. She has been seen several times since and appeared normal and healthy in every respect.

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Pharyngitis or tonsillitis, whether occurring as a part of a nonspecific infection of the upper respiratory tract or as one of the contagious diseases, may lead to suppuration in the adjacent tissues; as a result, the familiar retropharyngeal or peritonsillar abscess occurs. In retropharyngeal abscess the infection is carried by lymphatics to the small lymph glands lying anterolateral to the upper cervical vertebra, which break down, causing an accumulation of pus, which as a rule, is circumscribed within the pharyngeal limits, but which in some instances may follow the deep fascial planes up to the base of the skull or down to the mediastinum.

A drawing reproduced from Corning (Fig. 1) shows a cross section of the neck at the level of the tonsil. The picture shows how much closer to the pharyngeal wall the internal carotid artery lies than does the external carotid artery, which is partly shielded by the styloid process and the muscles descending from it. In cases where the inflammatory process penetrates through the protecting fascia, the large blood vessels themselves, especially the internal carotid artery may become involved. The infection damages the vessel wall, weakens its protective coat, which, slowly distending, forms a pseudo-aneurysm which may suddenly rupture with devastating hemorrhage.

As a rule aneurysm of the internal carotid artery presents in the lateral part of the pharynx behind the tonsil, whereas aneurysm of the external carotid artery is found in the neck. In the presence of infection one must always view with suspicion any soft, smooth, fluctuant swelling presenting in the lateral part of the pharynx or at an angle of the jaw where pulsation is present or where there is a difference in the pulse of the two sides. A preliminary needle puncture may be a most valuable means of diagnosis, although at times a negative puncture does not exclude aneurysm because of the possibility of the sac being lined with heavy coaguli.

Salinger and Perlman², in their analysis of 227 cases of hemorrhage following pharyngeal abscess, state that in 70 per cent erosion of the internal carotid artery occurred.

Diagnosis.—In the presence of a suppurative process in the tonsillar or pharyngeal area, a spontaneous hemorrhage from that area should always be considered a serious complication. Most likely

cause for it is an erosion of one of the larger blood vessels in the adjacent surroundings. In many cases there is only one hemorrhage and in some instances it is of such magnitude as to prove

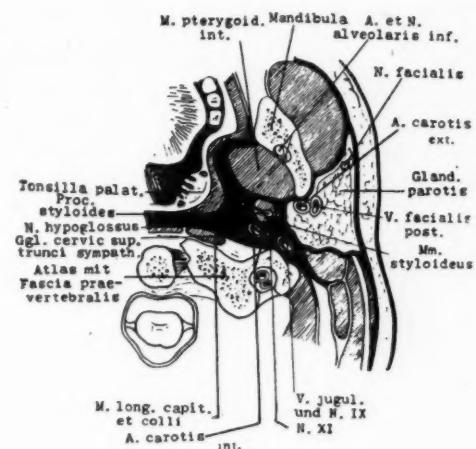


Fig. 1. Parotid recess and topography of parapharyngeal space. (After Corning.)

immediately fatal. But fortunately, like in the reported case, several hemorrhages occur at intervals and so give a warning of the impending disaster. Recurrent hemorrhages of fair magnitude in the presence of a peritonsillar or retropharyngeal abscess indicate involvement of a major vessel and no time should be lost to administer the proper treatment.

Brauer¹ has attempted to define the source of the hemorrhages from their character. He divided them into six groups.

1. Hemorrhage from the ear; false aneurysm of the internal carotid artery.
2. Sudden single foudroyant hemorrhage; false aneurysm of the internal carotid artery.
3. Several minor prodromal hemorrhages followed by a foudroyant fatal one; false aneurysm of the internal carotid artery. This group is differentiated from group 5 by persistent, ever-increasing, dense swelling in the throat or neck.
4. Several severe hemorrhages in succession; generally from branches of the external carotid artery.
5. Recurrent slight to moderate hemorrhages

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due to local vessels of the tonsillar bed or the palate.

6. Venous hemorrhage.

Therapy.—It is now the consensus that only drastic measures will prevent a fatal outcome. Ligation of the common internal or external carotid artery is the only therapeutic procedure worthy of consideration. Which vessel should be ligated will depend on the type of disease in each particular case. Taking Brauer's classification of types of hemorrhages, group 5, in which only minor hemorrhages occur, may be excluded; they can be controlled by local measures.

Skoog and Sercer pointed out the dangerous cases are those in which one or more of the following factors are present:

1. Spontaneous hemorrhage or hemorrhages so severe as obviously not to be arising from a minor vessel.
2. A protracted course in which the swelling fails to disappear following a previous incision.
3. Hematoma of the surroundings as evidenced by submucous discoloration or tense, brawny swelling.
4. Increasing pain, swelling locally and in the neck and trismus, despite incision of the abscess and long after the course of a normal peritonsillar abscess has been run.
5. The presence of pulsation in the peritonsillar area.

If any of these factors is definitely established the carotid sheath should be exposed and a search for the source of the hemorrhage made if the condition of the patient is not too critical. If the bleeding is due to one of the branches of the external carotid artery, ligation of the latter will control the hemorrhage. If such a condition is not found, the only safe procedure is ligation of

the common artery. As previously mentioned in 70 per cent of them erosion of the internal carotid artery was the cause of the hemorrhage. Therefore, if there is the slightest doubt as to which artery is at fault, it is much safer to ligate the common carotid artery. Naturally, everybody realizes the seriousness involved in the ligation of the common or internal carotid artery. Such a sudden interruption of the blood supply to one cerebral hemisphere might be followed by serious complications or might be even fatal.

The serious cerebral complications produced by ligation of the common carotid artery are due to the sudden shutting off of the arterial supply to half the brain. It is the consensus that immediate hemiplegia is due to anemia of the brain, although there are some authors who maintain that the modus operandi of this complication has not been definitely proved.

Nevertheless, most of the authors are in practical agreement that early hemiplegia is the result of anemia of the brain, and that this complication offers a better prognosis than delayed hemiplegia, which they believe is due to thrombosis or an embolus which leads to softening.

On summing up this phase of ligation of the common carotid artery, one finds on the basis of the accumulated experience of a century that 25 per cent of all ligations of the common carotid artery, regardless of age or ailment, are accompanied by serious cranial complications of which at least one-half are fatal.

When confronted with a serious mass hemorrhage due to erosion of the carotid artery, one has only one alternative, that is ligation, in spite of the complications which may arise from it. Ligation at least offers recovery while no intervention means certain death.

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EVOLUTION IN MEDICINE

From the medicine man of old to the modern clinic is a long way. Again and again mystery after mystery has been probed; again and again the utterly impossible has won acceptance against ancient truth; again and again the reach of medicine has been enlarged. The doctor's craft, with triumph after triumph to its credit,

is still on its way. Yet it is set within a larger problem of human well-being which up to now has hardly been explored. It will not be solved until we learn to make culture in all its color and drama an instrument of health.—WENDELL BERGE, Assistant Attorney General of the United States, *Pub. Health Rep.*, (Jan.) 1945.

CLINICAL-PATHOLOGICAL CONFERENCE

PUNCH BIOPSY OF THE LIVER

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The diagnosis and prognosis of hepatic disease is frequently difficult or impossible for the clinician unaided by x-ray or laboratory procedures. Even after the use of roentgenograms and the various liver function tests available today only a limited knowledge of the disease process can be gained by these methods. Liver function tests usually inform as to physiological activities

series from the literature in which a variety of methods were used with a result of 1 per cent fatality as a result of the biopsy. One hundred sixty aspirations of the liver were performed by Iverson and Roholm⁶ (1939) in Denmark without complications. Baron¹ (1939) reported thirty-five cases of aspiration biopsy without complication. Following his original publica-

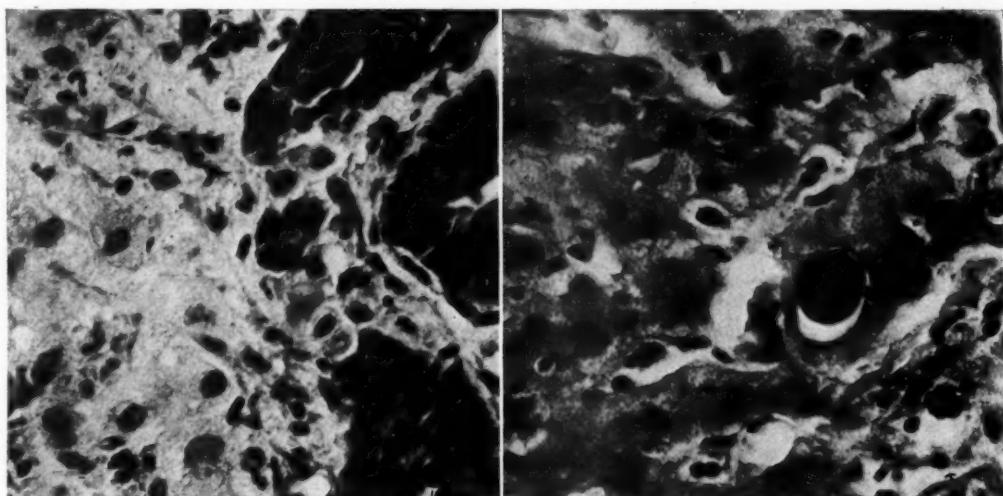


Fig. 1. Case 19. Hyperchromatic, anaplastic gland forming columnar epithelial cells invading degenerated liver tissue.

Fig. 2. Case 22. Large mass of inspired bile in canaliculus also bile in cytoplasm of liver cells.

of the liver and hence fall far short of pathognomonic information. Frequently the total information obtained in a given case leaves the clinician perplexed and he is unable to establish with certainty the true pathologic changes in the liver. An exploratory laparotomy may be the recourse taken. In many such cases a suitable liver specimen can be obtained with the Vim-Silverman biopsy needle⁸ to enable determination of the histopathologic alterations present at the biopsy site without resorting to a major surgical procedure.

Liver puncture has been practiced for a century in the treatment of cystic and suppurative disease of the liver and not until the last quarter of a century has the liver puncture become a recognized useful diagnostic procedure. Dible, McMichael, and Sherlock³ collected 613 cases of liver puncture aspirations and biopsies

he had one fatality due to bleeding. In 1941 Tripoli and Fader⁹ introduced the use of the Vim-Silverman needle in liver biopsy proclaiming a minimum of trauma to the liver and consequent bleeding from it. They had no serious complications of the fourteen examinations. One year ago Dr. F. W. Hoffbauer⁵ of the University of Minnesota had performed seventy liver biopsies without serious complications. Many more have been performed since that time.

In this series of twenty-five punch liver biopsies the Vim-Silverman biopsy needle was employed. It is essential to detect any bleeding tendency by a determination of bleeding, clotting and prothrombin times. In general the intercostal approach was adapted. The needle was usually passed through the ninth intercostal space approximately in the mid axillary line and on through the complementary pleural space and diaphragm. To insure against passing through the liver and into the

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TABLE I. LIVER BIOPSY CASES

Case	Age	Liver Size	Site	Reaction	Clinical Consideration	Biopsy Diagnosis
1	61	5 cm. below RCM**	10 I.S.*	none	Cirrhosis or Carcinoma	Metastatic Carcinoma
2	62	5 cm. below RCM	9 I.S.	none	Cirrhosis, Carcinoma, or Cardiac decomp.	Cirrhosis, Severe
3	47	2 cm. below RCM	9 I.S.	mild pleuritic pain	Hepatitis	Hepatitis
4	85	5 cm. below RCM	9 I.S.	none	Carcinoma or Cardiac decomp.	Chr. passive congestion
5	20	2 cm. below RCM	9 I.S.	mild pleuritic pain	Hepatitis or common duct stone	Hepatitis-sulfa sensitivity?
6	19	Percusses to RCM	9 I.S.	mild rt. shoulder pain	Hepatitis	Hepatitis
7	15	Percusses to RCM	9 I.S.	mild pleuritic pain	Hepatitis or Appendicitis	Hepatitis
8	61	Percusses to RCM	9 I.S.	none	Cirrhosis	Cirrhosis
9	31	1 cm. below RCM	9 I.S.	mild rt. shoulder pain	Hepatitis	Hepatitis
10	30	Percusses to RCM	8 I.S.	mild rt. shoulder pain	Cirrhosis or Hepatitis	Hepatitis
11	68	To iliac crest	8 cm. below RCM	none	Cirrhosis, Carcinoma or Cardiac decomp.	Metastatic Carcinoma
12	59	Percusses to RCM	9 I.S.	none	Cirrhosis, Hemochromatosis, Carcinoma, Hemolytic anemia Syphilis, or ?	Cirrhosis
13	64	Percusses to RCM	9 I.S.	none	Cirrhosis, or Carcinoma	Cirrhosis
14	62	3 cm. below RCM	9 I.S.	none	Carcinoma of Stomach—Metastases?	Normal liver (2 metastatic nodules found in liver at surgery.)
15	68	Percusses to RCM	9 I.S.	none	Cirrhosis, or Carcinoma	Cirrhosis, Severe
16	48	Percusses to RCM	8 I.S.	mild rt. shoulder pain	Bronchiectasis, Chr. Empyema Heart disease Amyloidosis?	Normal Liver
17	41	5 cm. below RCM	9 I.S.	none	Stone in cystic duct; perforated peptic ulcer; appendicitis pneumonia, portal thrombosis, or hepatitis	Hepatitis
18	51	Percusses to RCM	8 I.S.	none	Miliary tuberculos??	Normal Liver (Postmortem: tuberculoma—brain)
19	59	To iliac crest	3 cm. below RCM	mild aching in region	Carcinoma or Cirrhosis	Metastatic Carcinoma
20	64	4 cm. below RCM	9 I.S.	none	Carcinoma or Cirrhosis	Normal Liver (Postmortem: metastatic carcinoma)
21	58	3 cm. below RCM	9 I.S.	mild pleuritic pain	Carcinoma, Cirrhosis, Syphilis, or Heart disease	"mild congestion of sinuoids"
22	62	Percusses 1 cm. above RCM	8 I.S.	none	Obstructive jaundice, Carcinoma	"obstructive retention of bile in canaliculi of liver"
23	86	3 cm. below RCM	8 I.S.	none	Severe	Miliary Tuberculosis
24	54	7 cm. below RCM	9 I.S.	none	Infection	Cirrhosis
25		6 cm. below RCM	9 I.S.	mild pain	Carcinoma or Cirrhosis	Carcinoma

*I.S.—interspace.

**RCM—right costal margin.

gall-bladder bed or other vulnerable structures, the needle was directed cephalad by approximately 30 degrees. If the liver was markedly enlarged and especially when nodules were palpable the subcostal approach was chosen. If the liver was found high in position as is frequently the case in older patients, then the eighth intercostal space was used. If the liver margins could be neither palpated nor percussed with certainty as was frequently the case in patients with marked senile em-

physema or with deformed chest then a biopsy should be performed only after considerable reflection as to the serious dangers of the test and the value of the examination. It is imperative that the technique should be practiced on several different cadavers before employing the procedure clinically. A 1 per cent novocaine solution serves to anesthetize the skin and underlying tissue. Following the infiltration with procaine using the same syringe and needle, the liver substance is en-

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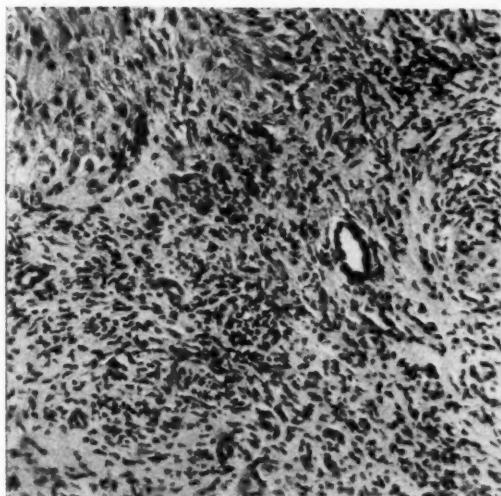


Fig. 3. Case 2. Extensive scar with degenerated liver cells.

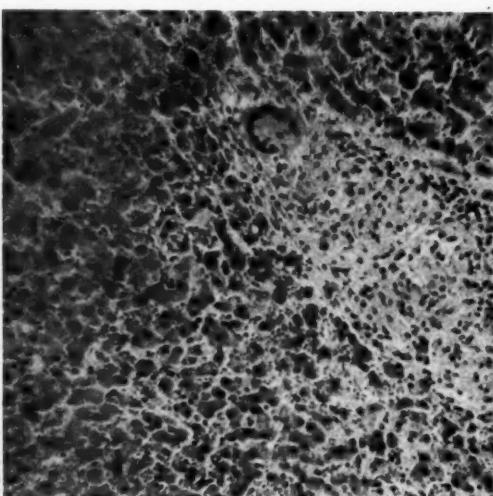


Fig. 4. Case 23. Typical miliary tubercle nodule.

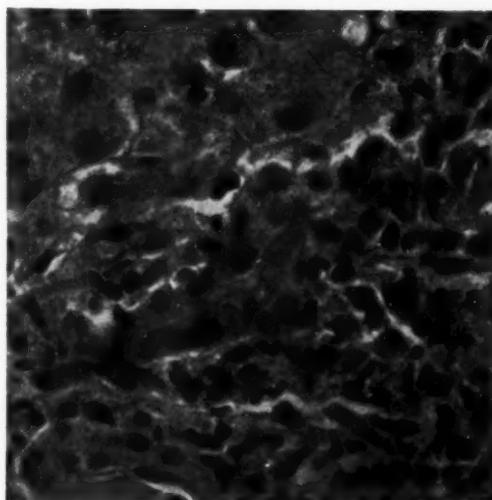


Fig. 5. Case 5. Neutrophiles and eosinophiles infiltrating portal areas with mild degeneration of liver cells.

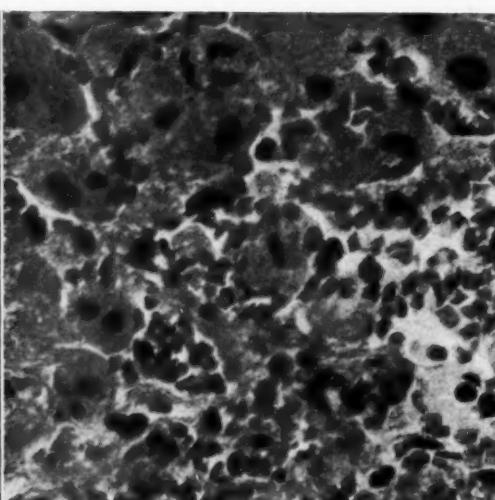


Fig. 6. Case 4. Congestion and dilatation of sinusoids with severe atrophy, degeneration and disappearance of liver cells in central zone.

tered and moderate suction applied; thus detecting the presence of liver abscess or hemangioma, both contraindications to the biopsy examination. The patient is instructed to hold his breath when the biopsy needle is advanced into the liver substance in order to prevent any movement of the liver which might further traumatize its surface or its structure and cause unnecessary bleeding. We do not favor the use of sedation and narcotics for fear of masking complications. The principal contraindications then may be listed as a bleeding tendency, abscess, hemangioma, or cyst of the liver, and uncertainty as to the exact position of the liver.

None of our twenty-five patients complained seriously and we experienced no complications. In those cases subsequently examined postmortem the biopsy site could not be found if the biopsy had been performed more than a week previously. However, even with the use of procaine the patient often sensed a little dull pain at the time of the biopsy and occasionally for several hours thereafter. This pain occasionally radiated to the right shoulder. Blood pressure readings and pulse were checked every two hours for at least twelve hours following the biopsy as a precaution against hemorrhage, the most common serious complication of the proce-

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dure reported in the literature. Infection, the second most common serious complication, was guarded against by surgical asepsis, a careful observation of details of technique in the performance of the test and repeated examination for peritonitis during the subsequent twenty-four hours.

From a review of our experience (Table I) it is obvious that any diffuse disease of the liver may be diagnosed with the plug obtained in the Vim-Silverman biopsy needle. It should be quite adequate for all cases of cirrhosis of the liver (Fig. 3) and acute hepatitis with jaundice (Fig. 5) (acute catarrhal jaundice). It is of great aid in the frequent cases of painless jaundice for the differentiation of a surgical from a medical condition. One might reasonably expect good results in those diseases involving the liver including schistosomiasis, miliary tuberculosis (Fig. 4), hemochromatosis, chronic passive congestion (Fig. 6) due to cardiac decompensation, long standing biliary obstruction (Fig. 2) with bile stasis in canaliculi, amyloidosis, cholangitis, fatty degeneration, and such malignant diseases as carcinoma (Fig. 1), Hodgkin's disease and leukemia with infiltration of the liver. Of course the malignancy may be missed by the biopsy needle. Acute hepatitis^{2,4,7} whether it be due to bacteria, virus, chemicals or serum is practically always diffuse and should be recognized in the biopsy excepting in very mild cases where the mild toxic changes in parenchymal cells might be inadequate for a positive diagnosis.

Conclusions: Punch biopsies of the liver using the Vim-Silverman needle has proved to be a diagnostic procedure of great merit. Its simplicity as compared to the complexities of the many liver function tests is especially contrasting when the pathognomonic nature of the biopsy is considered. Considerable care in the selection, performance of, and postoperative care of the patients for the procedure is of considerable importance in the avoidance of hemorrhages and secondary infections as complications of the test. A summarized review of our twenty-five cases with liver biopsy is presented.

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TRAINING PLAN ON PACIFIC DISEASES

An overall plan for training all personnel on appropriate aspects of prevention, control, diagnosis and treatment of diseases common to the Pacific Area has been approved, according to Major General George F. Lull, Deputy Surgeon General.

The following training has been planned by The Surgeon General for personnel of medical units being redeployed:

The time allotted to Tropical and Preventive Medicine Problems in the Basic Officers Course at Carlisle has been increased, and specially qualified instructors have been assigned to carry out this phase of the program.

The present eight-weeks course in Tropical Medicine given at the Army Medical Center will be reduced to four weeks beginning probably in September and will deal only with diseases common to the Pacific Area.

It is planned that a two-weeks course of instruction in diseases of the Pacific Area will be conducted at Medical Field Service School, Carlisle Barracks, Pennsylvania, to begin on or about 13 August 1945 for unit surgeons, medical inspectors, chiefs of medical services, and other selected officers from units of the three major

forces being redeployed. Instruction will include the prevention, control, treatment, and diagnosis of malaria, dengue, filariasis, Japanese B.—encephalitis, kalaazar, scrub typhus, louse and flea-borne typhus, relapsing fever, plague, bacillary dysentery, amebiasis, schistosomiasis, cholera, salmonella infections, bacterial food poisoning, venereal diseases, trenchfoot, nutritional deficiencies, dermatological conditions and other miscellaneous disease problems to be encountered in the Pacific Area. It is planned to assign a group of highly specialized, well-qualified instructors to the Medical Field Service School, Carlisle Barracks, Pennsylvania, to handle the instruction in the two-weeks course.

Upon completion of this course of instruction, officers will be expected to conduct training programs in the appropriate aspects of the prevention, control, treatment and diagnosis of these diseases for all personnel present in their units during redeployment. A training guide is being prepared for use in this unit personnel training.

In addition, a supplementary program of instruction for nurses of units being redeployed will be conducted at the training centers to cover the nursing problems associated with the diseases to be encountered in the Pacific Area.

HISTORY OF MEDICINE IN MINNESOTA

NOTES ON THE HISTORY OF MEDICINE IN HOUSTON COUNTY PRIOR TO 1900

By NORA H. GUTHREY†
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(Continued from the July Issue)

The fortunes of Brownsville after the war continued to improve until, in 1870, there were fifty stores, three hotels, two breweries, various saloons, two flour mills, two sawmills and a grist mill. Although in 1873 came a setback, when some of the residents refused to submit to taxation for a new brick schoolhouse, to cost \$10,000, and moved away, there were still a year later 600 persons in the village and more than 1,500 in the township. Paradoxically, the long and steady decline of Brownsville was caused by the coming of the Southern Minnesota Railroad from its northern right of way along the river; the tracks just at the water's edge damaged the steamboat landing; traffic from the river dwindled and the thriving town was reduced to a village once more. In 1880, in spite of the changed outlook, another physician, Dr. William W. Bell, a well-trained man from Pennsylvania, cast his lot with the village, succeeding Dr. Le Blond, and in the late eighties Dr. E. W. Bowles is said to have been in Brownsville. Dr. Bell and Dr. Riley were for a time the leading physicians of the community; perhaps when the affairs of Brownsville were at lowest ebb, they, like Dr. Le Blond, sought a better field.

Crooked Creek Township, between Jefferson and Brownsville Townships on the river, took its name from well-named Crooked Creek which traverses it. Inasmuch as record has not appeared of a resident physician within the borders, in either of the two villages, Reno or Freeburg, it is logical to assume that Drs. Sheldon, Le Blond, Riley and Bell and perhaps practitioners from Iowa lent their services to the sick. It is pleasing to assume that the presence of physicians in pioneer communities contributed to the maintenance of law and order; there is no doubt that without physicians, the township of Crooked Creek was afflicted, at least during the years of the Civil War, with a band of outlaws who established their headquarters on the Mississippi lowlands and lived on the plunder from their depredations among the law-abiding settlers. Finally their resort, Robbers' Roost, was stormed and the thieves were dispersed; some were drowned, some shot, and some sent to the Wisconsin State Prison.

La Crescent Township, the most northeasterly in the county, fronts on the Mississippi River, as does the village of La Crescent, which is at the mouth of the Root River, opposite La Crosse, Wisconsin. The first settler on the site of the village came in 1851 and in the next few years was followed by many other pioneers, all attracted by the beauty and apparent advantages of the situation, for the settlement lies in an elevated, crescent-shaped basin formed by the back-

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ward sweep of the river bluffs from the north and their forward curve again to the river at the south. By 1856 the possibilities of the site had caught the attention of The Kentucky Company, of Louisville, Kentucky, who actively promoted their project, bringing settlers, among them the first resident physician, Dr. H. T. Fox, who subsequently was mentioned by Dr. G. J. Sheldon, of Mound Prairie, in his diaries. Although enterprises of various sorts sprang up in La Crescent and schools were established, notably Carr Academy and the La Crescent Female Seminary, the ambitious little town was not to achieve the brilliant future for which it hoped, in which it should be a city rivaling La Crosse. The disappointment was owing partly to lack of a direct steamboat landing; partly to the shortsighted and greedy policy of the promoters, who gave no opportunity to investors; and perhaps chiefly to the fact that the Southern Minnesota Railroad, instead of beginning its westbound tracks at La Crescent, unexpectedly started them a few miles south at the new village of Grand Crossing; it was nearly ten years later, in 1875, when the bridge was built over the Mississippi from La Crosse, that La Crescent was on the route. But if La Crescent Village did not achieve its dream, La Crescent Township more than compensated in becoming the great fruit and vegetable growing region of the state and the source of improved knowledge of horticulture and superior varieties of products. And even though by the late seventies the commercial undertakings of the village were marked by only one store, a hotel, a railroad station, the minimal number of wagon and blacksmith shops, and by empty buildings, there was place for a physician in the person of Dr. A. A. Anstey; Dr. Fox had died in 1875. Except for the coming of Dr. Franklin H. Whitney, in the middle eighties, other record of physicians in La Crescent has not appeared.

In the accounts of the early days of La Crescent Township there is included the following story of an incident that perhaps was typical of the hazards encountered by the settlers and of their need for medical aid:

Section 6 (La Crescent Township) received another settler in July, 1853, Johannes Tuininga, a native of Holland, locating in the southwest corner. He proved a permanent settler and was still living there in the early eighties. At an early day, when physicians were scarce on the west side of the river, his wife was bitten by a rattle snake. Having no money, he supposed it impossible to procure a physician, and so, in considerable agitation, he proceeded to apply the only domestic remedy of which he had heard. With a ton and a half of hay he had bought four fowls and had raised twenty-four chickens. These he had killed one after another, and laying them open, applied them in turn to the bitten part, but without any alleviation of the symptoms. While the family were in despair, a stranger was seen coming up the road. He was informed of the emergency and asked if he were not a physician, though Mr. Tuininga, honestly enough, told him beforehand that he had no money to pay one. The gentleman, who was H. M. Rice, of St. Paul, was not a physician, but he gave Mr. Tuininga \$10 and told him to go for one at once. The doctor (name not given; perhaps Dr. Sheldon of Mound Prairie, the nearest settlement) arrived and Mrs. Tuininga recovered. Mr. Tuininga never forgot this act of kindness, and when, years afterwards, he saw Mr. Rice's name on a ticket at the polls for Governor, he voted the straight ticket of that party, for the only time in his life.

History of Houston County, 1919, page 159.

There was another recorded incident of early days, bizarre, and eligible here only because it concerned a subject of scientific interest, which attracted a certain amount of attention to La Crescent. In 1864 a contributor, of La Crosse, Wisconsin, submitted to a dignified eastern medical journal a report under the title, "Remarkable case of fecundity,"* in which it was stated that in 1861 the practitioner had delivered a woman living in La Crescent, Minnesota, of three children; that in 1862 he had delivered her of three more and in 1863 of yet another three. In January the journal published this interesting contribution from the West, but

*Boston Medical and Surgical Journal, 69:453-454; 70:227, 1864.

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in April a correction appeared, for the editor suddenly had become aware that he had been hoaxed: The reporting "physician" had proved to be a layman, editor of a La Crosse newspaper, who had succeeded only too well in his story of productivity in the fabulous new country.

Hokah Township, lying along the great river between La Crescent and Brownsville Townships, received, permanently or transiently, in the period from 1856 to 1896, inclusive, eleven physicians of whom record remains.

The first settlement in Hokah Township was made in 1851 by Edward Thompson and the village of Hokah was laid out by him and his brother early in 1855, although it did not become an independent village until 1871. Most beautifully situated on a crescentic ridge, dominated by Mt. Tom, the village commands scenic views in every direction, climaxed by surrounding peaks, which are mountains in all but altitude. The name Hokah was that of an Indian chief, whose village, according to tradition, stood on the spot occupied by the present village, and in those days the name was given by the Indians to the river also, later called the Root (a translation); still another name given to the river by the Sioux was Hutkan. Edward Thompson was a man of considerable engineering and mechanical ability, which he applied to utilize the water power of Thompson's Creek and the Root River. This water power was employed subsequently by the shops of the Southern Minnesota Railroad, from 1866 to 1880. In the latter year, the Chicago, Milwaukee and St. Paul Railroad Company having gained possession of the railroad, the shops were removed, with the result that the business interests of Hokah received a blow from which recovery was delayed and disappointing.

The first mention of medicine (by courtesy) in the village was in connection with the illness of Mr. Jerry Jenks, one of the early settlers of the town, soon after his arrival in about 1852. After some difficulty a practitioner was induced to come from a settlement in Iowa. He gave the patient "hydro-path treatment, which was quite popular at the time, but it proved ineffective and the man died." In the ensuing decade three physicians and a druggist were known in the township and village of Hokah. Of these, Dr. Charles Jenks (his relationship, if any, to Mr. Jerry Jenks, is not known), began his practice there in 1856. Presumably in this year also Jehiel Gregory, a druggist, came from Delaware County, New York. In 1857 Dr. Hamilton B. Train, about whom more will appear, settled in Hokah, and two years later Dr. Truman R. Humphrey arrived.

In the middle and late seventies, while Hokah Village still had the atmosphere of growth and prosperity, it attracted for a few years Dr. Dirk Van Krevelen, a Hollander of varied and adventurous career who is said to have moved with his family from location to location, combining on occasion business and professional interests, seeking new frontiers. His immediate contemporaries in Hokah probably were Dr. William W. Holden and Dr. S. C. White, both evidently men of ability and independent thought. These two practitioners were mentioned by Dr. G. J. Sheldon in his diaries, together with Drs. A. C. Gates, H. T. Fox, Cowles, J. S. O'Connor, J. T. Bowen and T. A. Pope, in other townships, of whom additional mention will be made. Dr. E. D. Stewart and Dr. E. W. Hammes are said to have practiced in Houston County, localities unnamed. Record has been sparse as to Dr. Hammes' years in southeastern Minnesota and has been entirely lacking with regard to Dr. Stewart.

Hokah continued to attract physicians even after the bustle of railroad shops

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had departed. By 1883 Dr. Albert J. Carpenter, sometime of Sheldon, in the center of the county, had settled in Hokah. In the early nineties, at the beginning of his medical career, Dr. Edmund B. Johnston practiced there for a time before going on to Caledonia, and in this same period came Dr. J. R. Wilson. It was not until the spring of 1896 when the village once more offered opportunity, there being then no active resident physician, that a permanent practitioner opened an office in Hokah; Dr. Arthur M. Crandall served the community for six and a half years.

Mound Prairie Township, at the northern boundary of the county in the second row of townships from the river, first settled in 1853 and organized officially in 1860, was named, tradition states, by Dr. Chase, an early resident, because of a remarkable rounded bluff that rises in the midst of one of the township's wide valleys. In this region of unusual topography and productive farms, there was, in the early years before the inevitable exploitation of timber, a rich growth of black walnut along the valley of the Root River, which traverses the township with many undulations from west to east.

To the community of Mound Prairie in the township of this name came Dr. Giles J. Sheldon in 1856, as stated previously, to employ his skills, to acquire farm lands and to build the beautiful farm home which was his professional headquarters as well. The large residence, on a gracious rise fronting the road to La Crosse (now Federal Highway No. 16) half a mile from the settlement of Mound Prairie, still stands as the home of members of his family. In the fifties there grew up around the physician's home almost a settlement: for a time one Charles Chase (Dr. Chase?) operated a store on the Sheldon farm, and in 1858 a schoolhouse was erected opposite the Sheldon residence.

Union Township, lying irregularly to the south of Mound Prairie Township, was a surface evenly divided between hills and valleys. Although the official organization of this township, with a full quota of officers, including pound masters, did not become effective until April 5, 1858, the settlers, chiefly farmers, lumbermen and millers, smiths, wainwrights and other practical workers, had begun coming in 1853. In the absence of villages in the township, the settlements in the surrounding divisions of Mound Prairie, Brownsburg, Mayville, Caledonia, and Sheldon gave sufficient places for sale and purchase, and evidently the physicians from those villages cared for the sick; in 1881, notably, Dr. W. W. Holden of Hokah, was serving as health officer in Union Township.

Mayville Township, south of Union, its northwest corner in the exact center of the county, around 1853 first received settlers, industrious, honest home-seekers typical of the builders of the entire county, who were quietly successful in their purpose. The village of Caledonia, chiefly in Caledonia Township, in one portion crosses the line into Mayville and, logically, the physicians resident in Caledonia, and there were many over a period of years, extended their practice throughout Mayville Township.

Winnebago Township, named for the Winnebago Indians who once roamed the territory, second division from the Mississippi, and *Wilmington Township*, third from the river, lie along the Iowa border. They are mentioned together here because they are contiguous, are of similar topography, and are equally fertile and well watered. They received their first settlers in the same year, 1851,

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and were organized officially, at separate meetings, on May 11, 1858. They had community of interest in suffering together tribulation from storms, floods, blizzards, wolves and the fear of attack by Indians as, of course, had the other townships in varying degrees; in being a pathway for travelers who came southwest from Brownsville and northwest from Lansing and McGregor, two towns on the Mississippi shore in Iowa; and, most important, in sharing not only occupations but also a closely knit community of settlers in the region of Portland Prairie.

Near the southern border of the townships, extending from Winnebago into Wilmington and into the state of Iowa, Portland Prairie embraces several sections of land, and it was in or near this region that most of the earliest settlers took claims. The Prairie during 1854 received a considerable accession of pioneers, most of them from Rhode Island and Massachusetts, who settled between the community of Eitzen (not organized until around 1865), Winnebago Township, and the village of Portland Prairie, established in 1854 (later to become Wilmington, in Wilmington Township, when the post office was moved). This group of travelers, disembarking from a river craft at Lansing, without a definite idea of their destination except that they were going to Minnesota, first proceeded overland to the land office at Brownsville, where a few of them elected to stay. The remainder, among them Dr. Alexander Batcheller, voted to go on to Portland Prairie, of which they first had learned at Brownsville. Dr. Batcheller, the first physician to attend the settlers of Portland Prairie in the illnesses and injuries of pioneer life, evidently was a man equal to the problems and emergencies of the time and place; his name animates all historical narratives of Houston County as that of a moving spirit in all matters pertaining to civic development. If there were contemporary physicians in the two townships, record of them has not appeared. In the eighties Dr. George J. Cass, later in Caledonia, was in Portland Prairie.

In the third row of townships from east to west, which is comprised from north to south of *Houston*, *Sheldon*, *Caledonia* and *Wilmington*, the divisions of Houston and Caledonia, for reasons that do not appear definitely but that were probably the unusually rich farming land, favorable conditions for milling of all types and the promise of adequate transportation facilities that attracted many settlers, were supplied more generously with physicians than were any other portions of the county.

Houston Township claims as its first settler, Captain W. G. McSpadden, who on June 14, 1852, arrived at the forks of the Root River. Recognizing the site as one of potential commercial activity, Captain McSpadden promptly staked out his claim, although he did not take up his residence until two years later, when he was accompanied to The Forks or was followed there by many other settlers. In 1854 he opened the first regular store, bringing his goods from La Crosse, over the Mississippi River and up the Root River on a keel boat, of which he was both owner and pilot. Later on he returned to the Mississippi townships and his earlier occupation of ferrying, but for several years he continued his colonizing. In 1856 he plotted on his farm around the forks of the river the townsite of Winfield, which was the beginning of the village of Houston. Soon the settlement was growing and thriving. There were, chiefly owing to the initiative of Captain McSpadden, a flour mill, sawmills, a machine shop and an amber cane manufactory (this cane was a crop which for some years received intensive cultivation in Houston and Fillmore Counties), which pro-

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duced many hundreds of gallons of syrup. There were soon other general stores, and the drugstore of W. H. Birdsell, who had come from Canada in 1857, a post office and a schoolhouse (school had been held first in the cabin of a settler). There was a ferry, whose rates were quoted earlier in this account, and even an active boat yard in which several steamboats were built. Ultimately, however, when the railroad came into the locality in 1866, a new Houston Village sprang up on the present site, a mile west, and The Forks, or Old Houston, or Lower Houston practically was deserted, as far as business was concerned. By 1870 the population of the township was 1075 and by 1880 the immediate community of Houston was the home of forty or more essential enterprises.

In this place of material promise and of increasing growth, whether Old Houston or New Houston, physicians were needed, and many came. One of the earliest was Dr. Timothy Arnold Pope, first of Pope's Prairie, south of Caledonia, and later of Yucatan and Sheldon; he remained a quarter of a century faithful to Old Houston. Of the same general period was Dr. P. T. Bowen and, for a time, Dr. Stewart V. Groesbeck, in association with Dr. Bowen. The seventies brought Dr. Isaac Whittington Timmons, early of Money Creek; Dr. Paul Bjornson, native of Iceland; and Dr. Henry Porter Johnson. In the early eighties came Dr. Edwin M. Sheldon and Dr. Gustav Erdmann; Dr. De Costa Rhines, later of Caledonia; and Dr. Cassius S. Cranson. In the nineties there settled in Houston Dr. Lewis K. Onsgard, native of Spring Grove Township, whose initial medical practice had been in near-by Harmony, Fillmore County, and the equally loved Dr. Otto F. Fischer, who earlier had been in Caledonia.

Sheldon Township, well in the interior of the county, beautiful, well watered, easily accessible by lovely valleys, gave promise of becoming the site of a thriving commercial settlement, the village of Sheldon. Founded by Julius C. Sheldon, of Suffield, Connecticut, plotted by Dr. Giles J. Sheldon (not closely related to J. C. Sheldon), the village, on Beaver Creek, which is tributary to the South Fork of the Root River, was the chosen home of many who strove for other than agricultural development of the region. As in other localities, the settlers represented various nationalities; Norwegian, Scotch, Irish, English, and American of mixed strains. Of the pioneers who came to the community, a few passed on to other parts of the state, but the majority remained, at least until it became evident, in 1866, that the Southern Minnesota Railroad would leave Sheldon Village to one side.

Into the community when its hopes were high, came its first physician, Dr. Timothy A. Pope, from Yucatan (and soon to return to Yucatan for a time before settling permanently in Old Houston), and a Dr. F. B. Hinkley, less active professionally, it is believed, who although physician and surgeon apparently was more occupied with his manufactory of "harvest bitters" than with the care of the sick. In 1858 The Reverend Rolland Fuller Sheldon, physician and clergyman, brought his bride to the village, and from Sheldon as a center these two, as home missionaries of the Baptist Church, for a few years were engrossed in their work of carrying medical aid and spiritual comfort to the settlers in a widespread territory. By 1878 Dr. Albert J. Carpenter, later of Hokah, had joined the community of Sheldon, and next after him, for a while in the middle eighties, came Dr. Cassius S. Cranson, later to be in Houston.

Caledonia Township, high and dry on a beautifully undulating prairie, was in the path of immigration westward and profited by its location. Its very

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height and dryness proved, in the earliest years, to be a difficulty until adequate wells could be dug or drilled to supply good water to the rapidly increasing population, transient and permanent. The first settler came in 1851, the village of Caledonia was platted in 1853 and it soon became a stopping place, and consequently a business point of importance, for hundreds of homeseekers who were proceeding westward from the port and land office of Brownsville en route to homes in southwestern Minnesota.

In April, 1855, the county seat of Houston County was removed from Brownsville to Caledonia, where it has remained, and in the same year, on August 30, the first term of the United States District Court, Territory of Minnesota, convened in the first judicial district of Caledonia. The township was organized, like many others in the county and the state, on May 11, 1858, the day on which Minnesota was admitted to the Union; the village was not organized until 1870.

Educational interest, as well as civic pride, was high in Caledonia. The first schoolhouse in the township and the county was built in 1854, by subscription, as has been said, and in 1856 there was erected the building of the Caledonia Academy, authorized by an act of the legislature which was approved on March 1 of that year. One of the members of the academy's first board of trustees was Dr. Alexander Batcheller, of earlier mention, from Portland Prairie.

And not least among the achievements of Caledonia's citizens was a railroad. Although in 1866 the Southern Minnesota Railroad was completed as far as Houston Village, to the north, populous Caledonia for thirteen years more had only stagecoach transportation. It is recorded in the histories of Houston and Fillmore Counties that the initial proceedings toward realization of a local railroad were taken in November, 1873, by a small group of Caledonians who, with Thomas Abbotts as president, organized the Caledonia-Mississippi Railroad Company. Begun as a strictly local enterprise, the "Narrow Gauge" in 1874 was graded partially between the Mississippi River and Caledonia, but only after years of effort and discouragement and only after the people of Caledonia had voted a bonus of \$20,000 could there be effected arrangements for completion of the project (the road now to be called the "Caledonia, Mississippi and Western;" later the Reno-Preston Division) by the Chicago, Clinton, Dubuque and Minnesota Railroad, a company then becoming interested in extending its lines into Houston and Fillmore Counties. On September 26, 1879, "the first train entered the village of Caledonia amid the rejoicings of the people. Immediate steps were taken to push the enterprise to Preston and such was the energy displayed that on Christmas Day, the same year, the locomotive reached that point." Not until 1901 was this useful narrow gauge road made a standard gauge route.

It is not strange that Caledonia from the first attracted physicians and that its medical history in the county has been outstanding. In the earliest group of medical practitioners in the village and the township, and in the county, were Dr. John W. Albee, one of the colony who came to Portland Prairie from Rhode Island, Dr. M. J. Veiling (or Velling?), and Dr. Timothy A. Pope, then of Pope's Prairie, south of Caledonia. In the sixties came Dr. John Edwin Pope, of regrettably short career, nephew and student of Dr. Timothy A. Pope; Dr. John S. O'Connor, of vivid memory; Dr. Harvey B. Laflin, of indistinct record. One would like to assume Dr. Laflin's relationship to Eliakim Laflin and his wife Elvira, two of the earliest settlers, who lived near Eitzen in

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Winnebago Township. Eliakim Laflin was one of the first road supervisors in the county; indeed, the first road projected, specified at the first meeting of the county board, on May 26, 1854, was to run from Brownsville by way of various new farms to the Iowa state line—"near Eliakim Laflin's." And when, on May 11, 1858, the first town meeting was held, the Laflin home was the scene of the deliberations and Mr. Laflin presided.

To Caledonia in the early seventies there came Dr. George L. Gates, who since boyhood has lived in southern Minnesota and who, after a period of practice in Caledonia, moved to Winona. In 1879 came Dr. George Nye, who had previously for a year or two practiced in Riceford, Spring Grove Township; and in the late seventies and early and middle eighties, Drs. F. Castle, Herbert D. B. Dustin, William H. McKenna, Albert C. Gates, Andrew J. Christensen (who perhaps was much earlier). W. W. Freeman, Joseph Mark (from Russia), and Harry L. Piggins. The nineties brought, for varying terms, Drs. Leslie Avery; Edmund B. Johnston, from Hokah; De Costa Rhines, from Houston; Edward L. Hills (whether he actually was a resident is uncertain); Robert Y. Ferguson, William E. Browning and, last before the turn of the century, it is believed, George J. Cass from Portland Prairie.

Wilmington Township, the southernmost of the third vertical row of townships, was discussed earlier in association with contiguous Winnebago Township.

Money Creek, Yucatan, Black Hammer and Spring Grove Townships, in order as they extend from north to south, form the western portion of Houston County. Settled in the same period, beginning in 1852, in the main by hardy Scandinavian homeseekers, their farms, mills and business interests kept step. There is record of but few resident physicians in the northwestern part of the county. Obviously the services of the occasional physician who did practice there, together with the attendance of physicians from Houston and from Rushford, in Fillmore County, were available and adequate for the needs of the settlers of the region.

Money Creek Township, first settled in 1853, is a well-watered and well-wooded region of many fine farms and, in the early decades, of many mills. Once called Hamilton Township, after a state law was passed forbidding the use of a given title for more than one township or city in the state and it was found that there already was a Hamilton (in Fillmore County) in Minnesota, choice of a second name was obligatory for the township. It happened about this time that one of the settlers had the misfortune to drop his purse in a little stream when fording it near the hamlet of Clinton, which stood on the east bank, and that when he had spread out the wet paper currency on a bush to dry, a gust of wind swept the notes back into the water. All of the money was not recovered, a fact that suggested the name, Money Creek, for the stream, a title that so pleased the settlers as a body that they adopted it (in 1865) for both township and hamlet. In the settlement of Money Creek, for a time in 1870, when he first came to Minnesota, Dr. Isaac W. Timmons practiced medicine, and a note has appeared that in 1880 and 1881 Dr. Charles H. Wagner made this place his headquarters.

Yucatan Township, unnamed in 1852, received in that year as its first settler a man who, having read of explorations in Yucatan, Central America, made by a traveler and author (John L. Stephens) of surname similar to his own, was

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inspired, it has been suggested, to bestow the title of Yucatan on the scene of his own adventure. Whatever the truth of this bit of history, Edwin Stevens had faith and energy. Active in various localities in the township and in adjoining townships, by 1856 he had platted the village of Yucatan (once Utica) on a townsite of forty acres. During that summer he completed five log buildings and a milldam and began work on a sawmill. Although he did not remain long thereafter, the name of his choosing was retained both for his village and for the entire township. In 1856 there came from Pope's Prairie, south of Caledonia, into Yucatan Township Dr. Timothy A. Pope, who was the first physician in Yucatan Village and who became the first postmaster in the post office which he secured for the settlement. In the late seventies the names of Dr. Oliver McGuffey and Dr. Gilbert Thomas were associated (noted in a single edition of a commercial directory) with Yucatan. The residence of these men in the village has not been confirmed.

Black Hammer Township, third of the four western divisions, and first settled in 1852, owes its name to a fortuitous incident and to the sentiment of a homesick pioneer. It is recorded that Knud Olson Bergo, one of the earliest settlers of the county, who lived just across the line in Spring Grove Township, one morning on looking to the north noted that in the night a fire had swept across the intervening prairie and over the face of the bluff in the background. Spontaneously, as he saw the darkened bulk, he said "Sort Hammer!" (black bluff). The name of a height at Slidre Valders, his birthplace in Norway. By fortunate judgment the name was preserved, changed only to use two languages. To another Norwegian pioneer, Torkel Aagensen, who was the second settler in Black Hammer Township, belongs the credit of beginning agriculture and horticulture in this section of the county, for it was he who broke the first ten acres of farm land in the township and who subsequently planted an orchard and harvested the first crop of apples ever raised in the locality. And this township, in addition to the substantial advantages which it possesses in common with all of Houston County, has the distinction of holding interest for geologists and anthropologists, who are said to have found in its northern portion traces of an unrecorded people.

The name of a resident physician has not been observed in the records of the township. Of the several practitioners from neighboring communities who undoubtedly gave professional aid to the settlers of Black Hammer township, one was Dr. Rolland Fuller Sheldon, of Sheldon Village, to the northeast, who during an epidemic of black measles that raged in the township in 1863, contracted the disease and died.

(To be continued in the September issue.)

President's Letter

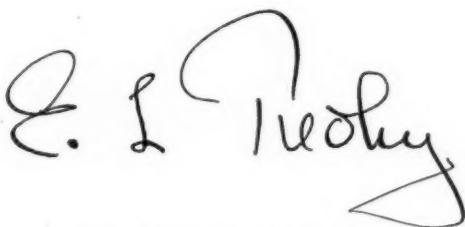
Many letters come to your President. Many are from personal friends and former interns now in service.

Plans for prepayment medical service are confusing to men too busy with war imposed duties to review many of the pamphlets and articles that appear in our journals or come out from our associations and special committees. Those maintaining that servicemen are learning how to fit into some future panel regimentation or civil service are certainly far afield of the acid opinions that come to me. Our Executive-Secretary, Mr. Rosell, has the same impression from personal letters and questionnaires. Nevertheless, that argument is freely used by the proponents of the Murray-Wagner-Dingell Bill.

They claim that this security and health legislation is nothing more than prepayment for health services imposed on a national level; that there is no intention of changing the relationship of patients and physicians. No matter what the intention of social legislation planners may be, they cannot be expected to see through to the ultimate dislocations that follow any universal schedule designed for all our greatly varying states, not to mention the divergent interests of farmers and industrial workers, closely packed urban centers or thinly populated districts.

The recent political turnover in Great Britain is certain evidence that mass experiments involving health, governing private ownership and statutory regulation of work and commerce, are to be decisively extended (Beveridge Plan). It is to be hoped that our political leaders may be less precipitate.

Much of our State is rural. Fair-minded people make up our population. It is not easy to impose upon farmers and those serving them the methods of caring for the sick that large industrial plants find advantageous. Note the trouble we are having with the EMIC program, and that is only a start. An alert, adequate and experienced doctor in one of our southern counties writes that he is now told whom he may call in consultation for obstetrical problems. Is such irksome restriction necessary for any nationally devised health aid? If so, we should all study and support prepayment service schedules on the state level.



President, Minnesota State Medical Association.

♦ Editorial ♦

CARL B. DRAKE, M.D., *Editor*; GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

CHEMOTHERAPY OF TUBERCULOSIS

SEVERAL sulfonamide compounds possess slight bacteriostatic activity against the bacillus of tuberculosis but in no instance has this been sufficiently marked to foster hopes of clinical application. Drugs of the sulfone series (promin, diasone) are active against experimental tuberculosis of guinea pigs but the toxic potentialities of available drugs in this group restrict their use for human beings to topical application in treatment of superficial lesions of tuberculosis. Although promin in a jelly vehicle recently has been approved for distribution by the Federal Drugs Administration, no fully convincing evidence of its therapeutic efficacy has been submitted as yet. Promin also has been released for parenteral administration in treatment of leprosy and this solution has been utilized in nebulized spray for treatment of tracheobronchial tuberculosis, but not in a sufficient number of cases to prove its effectiveness.

A third group of interesting compounds (heterocyclic sulfones) is represented by promizole, which is effective in treatment of experimental tuberculosis of guinea pigs, but clinical trials so far have revealed inadequate evidence of therapeutic efficacy. Promizole, when given orally, is distinctly less toxic to the human being than are the diphenyl sulfone compounds, such as promin and diasone.

Several antibiotic substances have been described in the past twenty-five years which are effective against *Mycobacterium tuberculosis* in test-tube experiments. Only one of these has as yet demonstrated an ability to arrest the progress of tuberculosis experimentally induced in guinea pigs. This substance is derived from cultures of a soil-inhabiting fungus and is called "streptomycin." It is highly effective in treatment of experimentally infected guinea pigs but previous disappointments with other substances should temper any enthusiastic predictions as to clinical applications of this drug in tuberculosis. Streptomycin is difficult and expensive to produce and the extreme scarcity of the material will be a

restraining influence on clinical studies for many months to come.

Many forms of tuberculosis in man tend to improve spontaneously and this fact must constantly influence judgment of apparent chemotherapeutic effects. The granulomatous tissue responses to chronic tuberculous infection may offer a serious obstacle to penetration of bacteriostatic substances. Most antibacterial agents are not bactericidal but act by restraining multiplication of the pathogens. Hence the rapidity of the patients' recovery will depend on natural reparative mechanisms, which are slow in tuberculosis. The probable longevity of tubercle bacilli may also be a deterrent factor to rapid healing of lesions, even in the presence of an adequate concentration of a bacteriostatic agent. Despite these theoretic handicaps it must be emphasized that steady progress has been maintained in the search for an effective and safe chemotherapeutic or antibiotic agent in tuberculosis.

The beneficial effect of rest therapy, usually in the planned environment of a sanatorium, and the corrective collapse measures which remove mechanical handicaps to healing are thoroughly established as effective remedies in treatment of tuberculosis. No patient should refuse or postpone acceptance of these measures because of unreliable rumors of the imminent availability of a chemotherapeutic drug or antibiotic agent.

Patients are frequently very eager to receive experimental drugs, even when hope of benefit appears to be remote. Usually it is impossible to receive such drugs under these circumstances because of legal restrictions which have been imposed in recent years. These laws are designed to prevent unwise distribution of drugs whose safety may not have been determined and also serve to conserve rare and valuable drugs for essential research purposes. Investigators receiving experimental drugs may not share their supplies with other physicians and manufacturers must restrict distribution of such drugs to research institutions.

When the requirements of the present war

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have been met, it is ardently hoped that materials and talent will be diverted to research which may lead to improved methods of treating tuberculosis. This disease claims more lives than war, is similarly crippling and also selects its victims from the most productive age groups of the human race. No expenditure of effort, however great or prolonged, would appear excessive if it contributes toward the eventual conquest of the great white plague.

H. CORWIN HINSHAW, M.D.
WILLIAM H. FELDMAN, M.D.

LIMITATIONS OF INTRAVENOUS UROGRAPHY

INTRAVENOUS urography is an established method of outlining the renal pelvis, ureters and bladder on a series of x-ray films during the renal excretion of an iodine containing solution introduced into the venous circulation. In this way important information may be obtained concerning the functional and anatomical state of the organs of the urinary tract. The method is readily available wherever there is x-ray equipment and may be safely used in almost any patient except in the presence of renal insufficiency and hyperthyroidism. The value of the method rests entirely upon proper interpretation of the films and careful correlation of these observations with the history of the patient's illness and the results of general and other special examinations. The method is useful in the differential diagnosis of abdominal pain, the discovery of renal anomalies and the diagnosis of hydronephrosis and calculus disease. Nevertheless there are certain limitations to its value as a diagnostic procedure. Rapid or slow excretion of the contrast solution results in inadequately filled renal pelvis and ureters and unsatisfactory x-ray films. Even when the outline of the urinary passages is the best that is obtainable by this method, early lesions of renal tuberculosis, renal tumor and ureteral and vesical neoplasms may not be visualized.

Realizing these shortcomings, the careful clinician will require corroboration of the intravenous urogram by means of cystoscopy and retrograde pyelography whenever the clinical picture suggests the possibility of any of these lesions. Certainly these conditions will not be overlooked if all cases of hematuria and persistent pyuria are submitted

to instrumental examination of the urinary tract before a final diagnosis is made.

Proof that the findings in the intravenous urogram may be misleading in cases of hematuria is illustrated in a recent case. A female patient reported the passage of grossly bloody urine and the absence of pain or any other complaint. Intravenous urography showed an enlargement of the lower pole of the left kidney, considerable medical displacement of the left ureter and normal bladder outline. These findings suggested the diagnosis of a solitary renal cyst and were believed to explain the hematuria, especially in the presence of a normal bladder shadow. Surgical removal of the renal cyst was carried out from which the patient recovered. One year later she again noticed grossly bloody urine and also reported the gradual development of bladder irritation during the preceding three months. Cystoscopic examination revealed an infiltrating carcinoma of the posterior bladder wall. Suprapubic exploration showed extension of the tumor to adjacent pelvic structures and therefore inoperable. It is assumed that discovery of the tumor by cystoscopy one year before when the patient first presented herself would have permitted removal of the growth by segmental resection or its destruction by electroresection, coagulation and radium.

PHILIP F. DONOHUE, M.D.

EPIDEMIC OF RINGWORM OF SCALP

A WARNING of the imminence of an epidemic of ringworm of the scalp in children has recently been given by Layman in the May issue of MINNESOTA MEDICINE. In the June issue of *The Journal-Lancet*, Lynch has very timely emphasized that the incidence of this infection in St. Paul, Minnesota, has reached serious proportions.

Physicians in this region must be prepared to cope adequately with the problem. The return of children to school is not far off. That a method of early detection on a large scale and with minimum cost (the Wood light) is available has been demonstrated by many investigators.

The epidemic has been spreading westward from the East Coast over a five-year period and possibly has not yet reached many of our communities. Screening of migrant school children before further dissemination of this infection should be immediately started. All physicians in

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direct or indirect contact with school children should be on the alert. Certainly prophylactic measures, in which cases of epidemic ringworm of the scalp new to their particular communities are segregated from other children, are much easier than the x-ray epilation of the scalp required for many children when the epidemic is in our midst.

Full co-operation from the Minnesota Department of Health will be given to any physician who requests specific information necessary for the prevention, diagnosis and treatment of this infection.

MERRIAM G. FREDERICKS, M.D.

WHITHER BOUND, INTERNIST?

INTERNISTS must have read with great amusement and approval the editorial in *Surgery* for August, 1944, by Dr. Thomas Findley. Every internist should read this editorial. Besides the delight in Dr. Findley's juxtaposition of surgeon and internist it will give the latter pause.

Just what is the status of the internist at the present time?

Dr. Findley tells us how the surgeon looks at him. To the public he is a doctor "who does not operate." To the general practitioner he is a person who has more facilities to study and probably more knowledge of certain diseases. To the hospital boards he is an unknown quantity. The internist himself feels that he has lost his ranking position in the hierarchy of medicine. He realizes the surgeon dominates the field.

With the discovery of anesthesia and the introduction of asepsis, the surgeon has gradually evolved from an anatomical mechanic to a full-fledged physiologist, a technical expert and dramaturgist. He is a far more successful therapist in the eyes of the layman and to himself. This is because his material lends itself to such a conclusion.

There is a unity in surgical practices. It is blood, pain and force. Because of this unity the surgeon has been able to dominate the hospitals. There is no cohesion in medical practice. It consists of persuasion, education, readjustment; its diversity is centrifugal.

Let us examine the Minneapolis hospitals. Excepting the teaching hospitals, they are all operated mostly on the basis of surgical practices.

None of these hospitals has a medical floor or section. Why is this so? It is due entirely to the meekness of the internist. He is so immersed in the dialectics of his work that even his rightful position in the hospitals has disappeared unnoticed by him. To regain even this semblance of recognition he must combine in an aggressive group. With a united front he can persuade the hospital boards to recognize the importance of the grouping of patients. The first step toward this was accomplished when seven hospital boards in Minneapolis classified their staffs according to the respective specialties. The next move in the internist assertiveness is to educate the boards to appoint admitting officers who should be instructed (and backed by the board) to admit only such patients to the specialist's service for which he is classified. This step, if successful, will at least afford the internist the hospital recognition he has lost in the terrific momentum of surgical pressure and development.

It is only through hospital recognition that the internist can recapture some sort of niche in the hierarchy.—H. L. U.

A DEPARTMENT OF NATIONAL HEALTH

MANY years ago the American Medical Association advocated the establishment of a Department of National Health with a Secretary of Health as a member of the Cabinet. The medical profession has been advocating the advisability of such a procedure ever since but to no avail.

It would seem advisable that most of the thirty-five health activities of the Federal government be consolidated in one department instead of having them scattered, as at present, in various departments. Much duplication might well be avoided thereby.

On January 11, 1945, H. R. 1391, a bill to establish a Department of National Health, was introduced in the House of Representatives by the Hon. A. L. Miller of Nebraska. The bill has been referred to the Committee on Expenditures in the Executive Department and it is to be hoped that it will receive favorable consideration. It would doubtless be of assistance to Dr. Miller if physicians who approve the idea of a Department of National Health would write him to that effect.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics

of the

Minnesota State Medical Association

George Earl, M.D., Chairman

MEDICAL CARE PLANNING IN HIGH GEAR

That there will be no summer slump in the councils of the doctors charged with the complicated task of whipping the Minnesota Medical Care Plan into shape is evidenced by the fact that meetings and field trips for the purpose of exploring all available data are very much in the current scheme of things.

June 17 the Committee on Organization, of which Dr. B. J. Branton of Willmar is chairman, met, at which time the following committees were selected: Committee on Articles of Incorporation, Constitution and By-Laws, Dr. S. W. Watson of Royalton, chairman; Contracts, Premiums and Benefits, Dr. B. S. Adams of Hibbing, chairman; Administration, Dr. R. W. Morse of Minneapolis, chairman, with Dr. W. C. Chambers of Blue Earth, vice-chairman; and Finance, Dr. O. I. Sohlberg of Saint Paul, chairman.

Accompanying Dr. Branton, ex officio member of the quartet, to Detroit recently were Doctors Adams, Sohlberg and Chambers. The purpose of the trip was to observe the outstandingly successful Michigan Medical Service Plan firsthand. Recommendations made by Michigan experts on the basis of their experiences in the field will be carefully weighed.

Dr. Adams called a meeting of his committee on July 1 at Saint Paul, immediately following his return from Detroit. This committee is now hard at work making comparative, analytical studies of various Commercial Insurance, Blue Cross and Medical Service contracts.

It is hoped that by the first of September, after a great deal of painstaking exploration by subcommittee members, they will come up with some concrete recommendations to be presented to the Committee-of-the-whole.

VETERANS MEDICAL ADVISORY COMMITTEE PROPOSED

Appointment of an advisory committee of outstanding members of the medical and related professions to advise the President and the Administrator of Veterans Affairs with respect to the formulation of programs to provide medical care and hospitalization for veterans, was proposed in a bill introduced in the Senate by Senator Henrik Shipstead on June 25.

Reflecting the vein of much of the current thinking on the subject the Senator commented: "There is one point on which all Americans will agree, and that is that the medical service provided for returning veterans should be the best. Nothing short of this will be acceptable. Unfortunately, the people have reason to believe that this is not the case. Charges have been made by a variety of investigators which lead to the belief that medical care provided by the VA is on a standard far lower than that prevailing in ordinary practice in the United States."

Sharp Increases in Medical Care for Veterans Seen

Citing the recent report of the Senate Subcommittee on Wartime Health and Education of the Committee on Education and Labor, the Senator said: "This report reveals that the number of veterans who will incur disabilities in the present war can only be roughly estimated, but probably will not be less than 1,500,000 or even, 2,500,000. There are at present 350,000 veterans of World War I who are receiving compensation for disabilities incurred in service" (Statistics reveal that for every five veterans of the first World War, VA hospitals have admitted three patients: 4,757,00 veterans and nearly 3,000,000 cases).

"In addition to the veterans who have been disabled in this and previous wars, there will

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be those who have not incurred injuries in the service but for whose health the nation will undoubtedly feel responsible. The number, according to this report, may well be 20,000,000, or one in every seven of the total population. Veterans and their families may eventually comprise from one-third to one-half of our total population."

Quoting the Senator further: "It is my opinion that an advisory committee should be established and consulted about a hospitalization and medical care program that can give to the veterans the very best hospital facilities and medical care that the best trained men in the medical profession can give them.

"There is not merely a matter of medical care and treatment involved, but also the expert management of hospitals. I believe that the highest and most experienced men in the field of medicine and hospitalization should be consulted, with the view to having their wide knowledge and long experience in all parts of the country available for consultation and advice to the end that the best possible facilities can be insured for the care of these returning victims of the war."

300,000 BEDS EVENTUAL GOAL

That the problem posed in the handling of VA affairs is a complicated and far-reaching one, is well borne out by the fact that the Administrator of VA affairs foresees a need for 200,000 beds soon after the war ends. Some 91,000 are available now and 14,000 more are to be built next year. When peace comes, the Army and Navy are to transfer facilities with 100,000 beds to VA. This is expected to take care of immediate needs. However, as years pass and veterans grow older, the load will increase and it is estimated that within thirty years following the war an additional 100,000 beds will be needed.

All this, obviously, will run into huge sums of money. Annual operating cost of veteran hospital facilities and old soldiers' homes last year exceeded \$75,000,000. This year's costs are expected to rise to \$98,000,000 because of the influx of World War II veterans. Under the GI Bill of Rights, total construction outlays of \$500,000,000 have been authorized which will make possible the eventual construction of the additional beds for which the need is anticipated.

MINNESOTA VETERANS' HOSPITAL AT FULL CAPACITY

At the Veterans' hospital at Fort Snelling the seams are fairly bulging with the largest number of patients ever to be hospitalized in that institution since it was established. According to Carl D. Hibbard, manager, there are 735 veteran-patients at the hospital at the present time, leaving room for only three more. While the hospital has a bed capacity of 788, under government regulations the hospital must maintain 59 beds for emergencies.

To relieve the load there, district offices, which will have at least one full-time doctor on their staffs, are contemplated being set up as soon as the necessary facilities can be secured at Saint Paul, Minneapolis, Mankato, Duluth, Brainerd and Virginia, Mr. Hibbard has announced.

GIFT FOR REFRESHER TRAINING RECEIVED

The University of Minnesota was established recently as one of the principal centers for refresher training of physicians who have been in military service to refit them for civilian practice, when the W. K. Kellogg Foundation granted the medical school \$250,000 to be used for such training over a period of five years.

Training to be given such men, according to Harold S. Diehl, M.D., dean of the Medical School, will consist of three eight-week periods or blocks of courses, generously supplemented by work in hospitals with actual patients.

Courses will be in the center for continuation study and at the medical school. The refresher training will be under the general supervision of Dr. William A. O'Brien. Success of his courses was a principal reason for this large grant to Minnesota.

Ancker hospital, St. Paul, will provide a large share of the hospital service, Dean Diehl has announced, although other programs will be carried out at University Hospitals and Minneapolis General Hospital.

Before the program ends, it is predicted it will be one of the earliest activities in the prospective Mayo Memorial building. This is one of the first grants made by the Kellogg Foundation to a state institution outside of Michigan.

SUPREME COURT VOIDS MEDICAL BOARD

The Minnesota Supreme Court recently declared unconstitutional a provision of the Workmen's Compensation law, passed by the 1943 legislature, which provided for creation of a medical board to determine controverted or disputed medical issues in occupational disease cases.

The section voided by this action of the Supreme Court provided for a medical board of three doctors of medicine selected from a panel of fifteen nominees chosen by the Dean of the College of Medicine of the University of Minnesota, the council of the Minnesota State Medical Association and the Governor of Minnesota.

Ten of these nominees were to be doctors of medicine with at least five years' experience in the diagnosis, treatment and care of industrial diseases, and five, doctors of medicine with at least five years' specialization in the field of x-ray diagnosis and treatment.

Under the statute, the Industrial Commission was authorized to furnish each party to the proceeding a copy of the panel of doctors, together with a request that each party select one doctor from this panel; and that the two doctors, so selected, choose a third doctor to constitute the medical board.

Medical Board Procedure

The medical board was authorized to examine the employee, including x-ray examinations, hear and examine witnesses and make such other examinations as it deemed necessary to a full presentation and understanding of the medical issue before them. Immediately after the conclusion of such examinations and hearings, it was directed to file its findings and conclusions with the industrial commission, signed by all the members of the board participating. The findings were to state, among other things, whether the employee had been afflicted with an occupational disease within the provisions and definitions of the Occupational Disease Law, and was also to include the names of the doctors who appeared at such examinations and hearings, and such medical reports and exhibits as were considered by it, its findings to be binding on the industrial commission.

However, there were no provisions under the law that a transcript of the evidence upon which the board's findings were based be filed with its report. On that premise, the Supreme Court

ruled the medical board, as set up, to be unconstitutional for the reason that it denied a claimant for compensation the right of full review guaranteed him by the workmen's compensation law under the "due process" clause in the statute.

OD Law Drawn Up After Careful Study

The Occupational Disease Law, as it was passed by the 1943 Legislature, was drawn up after careful study by an Interim Committee set up by the state senate and house. This committee consulted frequently with members of the industrial commission who were well versed in the subject. It was felt that in the creation of this board of medical specialists in the field of industrial disease, both the employee and employer would have recourse to the most fair, unbiased and expert judgment obtainable in the settlement of cases in dispute on subjects that were too technical for lay persons to pass on accurately.

Will Revert Back to Former Practice

With the elimination of the medical board, the statute, as it now stands, will permit the industrial commission, or a referee within the commission, according to established practice, to take testimony of *one* physician for each party on the question of occupational disease. If the commission or the referee hearing such evidence is unable to determine whether a claimant suffers from an occupational disease within the provisions of the statute, then the commission or the referee conducting the hearing may, upon his own motion, designate a neutral physician in good standing to examine the injured person and report his findings, which, in addition to other evidence, will be weighed by the commission or referee as competent evidence in determining this issue.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

Julian F. Dubois, M.D., Secretary

Minneapolis Physician Fined \$831 in the United States District Court

Re United States of America vs. Matthew Eich.

On June 28, 1945, Matthew Eich, M.D., forty-seven years of age, 1002 Donaldson Building, Minneapolis, was sentenced by the Hon. Matthew M. Joyce, Judge of the United States District Court to pay a fine of \$831 or be committed to jail until payment of the fine. Dr. Eich paid the fine. The sentence was imposed following Dr. Eich's entering pleas of guilty to eight separate

MEDICAL ECONOMICS

criminal charges of collecting rent on residential properties owned by Dr. Eich in excess of the Office of Price Administration's rent regulations. On the other seven criminal informations Judge Joyce continued the imposition of sentence and placed Dr. Eich on probation for two years.

Dr. Eich has been involved in numerous difficulties with the law dating back to 1936. On March 11 of that year, Dr. Eich was sentenced to pay a fine of \$25.00 or serve twenty days in the Minneapolis Workhouse after having been found guilty of violating the state health laws. In that case Dr. Eich was charged with furnishing false information in a death certificate. On January 30, 1939, Dr. Eich paid a fine of \$50.00 in the Municipal Court of Minneapolis, following his plea of guilty to a charge of cruelty to animals. Dr. Eich had been arrested in connection with the poisoning of a neighbor's dog. Dr. Eich took the case to the Supreme Court of Minnesota where he lost. On March 3, 1945, Dr. Eich paid a fine of \$10.00 in the Municipal Court of Minneapolis on a charge of coercion. The charge was based on Dr. Eich's cutting a hole in the bathroom wall of a fourplex owned by Dr. Eich. It was claimed that Dr. Eich cut the hole in order to force the tenant to move.

Dr. Eich's activities are under investigation by the Minnesota State Board of Medical Examiners to determine whether or not Dr. Eich should be disciplined by way of a suspension or revocation of his license to practice medicine.

Minneapolis Woman Pleads Guilty to Practicing Massage Without a License

Re State of Minnesota vs. Florence M. Johnson (Massage).

On July 6, 1945, Mrs. Florence M. Johnson, fifty-three years of age, 3852 46th Ave. South, Minneapolis, entered a plea of guilty in the District Court of Hennepin County, to an information charging her with the crime of practicing massage without a license. The defendant was sentenced by the Hon. Frank E. Reed, Judge of the District Court, to a term of one year in the Hennepin County Jail. The sentence was stayed for one year on condition that the defendant close her office at Suite 407 Medical Block, 608 Nicollet Ave., Minneapolis, dispose of her equipment and absolutely refrain from the practice of healing or massage, in any manner, in the future. This the defendant agreed to do.

Mrs. Johnson was arrested on July 3, 1945, following an investigation by Minneapolis police officers and a representative of the Minnesota State Board of Medical Examiners. It was discovered that Mrs. Johnson had opened an office in the Medical Block in April, 1945, and that she had in her possession a certificate dated June 24, 1940, which she had obtained from the Minnesota Clinical Institute, Minneapolis. The certificate was signed by John LeMay, president, and C. W. Wall, M.D. Dr. Wall died in January, 1944, and LeMay is under arrest at the present time charged with practicing healing without a basic science certificate. Mrs. Johnson was operating a massage and bath parlor under the name of Fredjohn Health Center, charging \$3.00 for her treatments. Part of Mrs. Johnson's equipment was purchased from a Mrs. Gertrude Smith who was arrested at the same address in August, 1944, for operating a massage parlor without a license.

PHYSICIANS LICENSED MAY 19, 1945

April Examination

ANDERSON, JAMES ROBERT, Northwestern, M.B. 1943, M.D. 1944, Mayo Clinic, Rochester, Minn.
ASHLEY, WILLIAM FRANCIS, U. of Ill., M.D. 1943, Mayo Clinic, Rochester, Minn.
ASHMAN, HUBERT CHIDESTER, La. State U., M.D. 1943, Mayo Clinic, Rochester, Minn.
BEARZY, HERMAN J., U. of Pittsburgh, M.D. 1943, Mayo Clinic, Rochester, Minn.
BRADLEY, WILLIAM FRANCIS, Ohio State U., M.D. 1943, Mayo Clinic, Rochester, Minn.
CLARK, FRANCIS HARRISON, U. of Ore., M.D. 1943, Mayo Clinic, Rochester, Minn.
CROWLEY, JAMES HARVEY, U. of Minn., M.B. 1944, Mayo Clinic, Rochester, Minn.
DAVIS, RICHARD MERRILL, Indiana U., M.D. 1944, Mayo Clinic, Rochester, Minn.
DE VOE, ROBERT WESLEY, Creighton U., M.D., 1943, Mayo Clinic, Rochester, Minn.
DISTLER, EDWARD KARL, Col. of Med. Evang., M.D. 1944, 648 Hollywood Ave. W., Detroit, Mich.
DOHERTY, ELMER MICHAEL, Marquette U., M.D. 1944, Elko, Minn.
ECKSTEIN, ARTHUR WILLIAM, Northwestern U., M.D. 1912, 814 Nicollet Ave., Mankato, Minn.
FERAYORNI, RICHARD RUDOLPH, Long Island School of Med., M.D. 1943, Mayo Clinic, Rochester, Minn.
FERRIS, HAROLD AARON, JR., Tulane U., M.D. 1944, Mayo Clinic, Rochester, Minn.
GOLTZ, ROBERT WILLIAM, U. of Minn., M.B. 1944, 2259 Summit Ave., St. Paul 5, Minn.
HANSBRO, GERALD L., Northwestern U., M.B. 1943; M.D. 1944, Mayo Clinic, Rochester, Minn.
HIGGINS, ROBERT SOURS, St. Louis U., M.D. 1943, Mayo Clinic, Rochester, Minn.
JENNINGS, DAVID THORNTON, U. of Pa., M.D. 1943, Mayo Clinic, Rochester, Minn.
JOHANN, ORLANDO PETER, Marquette U., M.D. 1944, 544 S. 7th Ave., West Bend, Wis.
KARSTENS, ANDRES, U. of Ore., M.D. 1943, Ancker Hospital, St. Paul, Minn.
KARSTENS, HANS CARSTEN, U. of Ore., M.D. 1943, Mayo Clinic, Rochester, Minn.
KIRBY, JOSEPH LONNIE, JR., Emory U., M.D. 1943, Mayo Clinic, Rochester, Minn.
KOZAREK, CLARENCE EDWARD, U. of Minn., M.B. 1944, 25 E. Fifth St., Duluth, Minn.
LUDDEN, THEODORE EDWARD, U. of Ore., M.D. 1943, Mayo Clinic, Rochester, Minn.
MAYFIELD, LEROY HENNING, U. of Tenn., M.D. 1939, Mayo Clinic, Rochester, Minn.
MEZEN, JAMES F., U. of Buffalo, M.D., 1944, Ancker Hospital, St. Paul, Minn.
PALMER, JAMES KEITH, Med. Col. of S. Car., M.D. 1943, Mayo Clinic, Rochester, Minn.
ROVELSTAD, RANDOLPH ANDREW, Northwestern U., M.B. 1944; M.D. 1944; Mayo Clinic, Rochester, Minn.
SHELDON, KEITH WALKER, U. of Neb., M.D. 1943, Mayo Clinic, Rochester, Minn.
SHERIDAN, VIOLA ELLEN, Creighton U., M.D. 1943, Mayo Clinic, Rochester, Minn.
SKILLERN, PENN-GASKELL, U. of Ind., M.D. 1944, Mayo Clinic, Rochester, Minn.
SMITH, DONALD EUGENE, Wash. U., Mo., M.D. 1943, Mayo Clinic, Rochester, Minn.
SPEAR, RICHARD CONRAD, Ohio State U., M.D. 1943, Mayo Clinic, Rochester, Minn.
SPURBECK, GEORGE HEADLEY, Marquette U., M.D. 1944, Proulx Bldg., Cloquet, Minn.
STARKE, WILLIAM OSCAR, Ind. U., M.D. 1944, Mayo Clinic, Rochester, Minn.

IN MEMORIAM

TOMLIN, HUGH MALCOLM, La. U., M.D. 1943, Mayo Clinic, Rochester, Minn.

TROXELL, MILLARD ANDREW, U. of Iowa, M.D. 1944, Hawarden, Ia.

WALLACE, ROBERT BRUCE, JR., Tulane U., M.D. 1943, Mayo Clinic, Rochester, Minn.

WELLS, JOHN JOSEPH, Creighton U., M.D. 1943, Mayo Clinic, Rochester, Minn.

WIECZOROWSKI, ELSIE IRENE, Northwestern U., M.B. 1944; M.D. 1945, Mayo Clinic, Rochester, Minn.

By Reciprocity

BANE, HELEN WHITTEMORE, U. of Minn., M.D. 1937, 303 N. 5th St., Brainerd, Minn.

BRODERS, ALBERT COMPTON, JR., Med. Col. of Va., M.D. 1943, Mayo Clinic, Rochester, Minn.

CHAPMAN, JESSE PUGH, JR., U. of Pa., M.D. 1943, Mayo Clinic, Rochester, Minn.

CONROY, MARTIN PATRICK, U. of Ark., M.D. 1943, Foley, Minn.

COUGHLIN, WILLIAM JOSEPH, U. of Toronto, M.D. 1934, Mayo Clinic, Rochester, Minn.

DEFORST, RALPH EDWIN, Wayne U., M.D. 1943, Mayo Clinic, Rochester, Minn.

ELLIOTT, ROBERT BURL, U. of Iowa, M.D. 1943, University Hospital, Minneapolis 14, Minn.

FORSYTH, H. FRANCIS, U. of Mich., M.D. 1940, 401 Med. Arts Bldg., Minneapolis 2, Minn.

GOGELA, LOUIS JAMES, U. of Neb., M.D. 1943, Mayo Clinic, Rochester, Minn.

JENSEN, GARVER LLEWELLYN, Stanford U., M.D. 1944, Mayo Clinic, Rochester, Minn.

LATTERELL, KENNETH EDWARD, Wayne U., M.B. 1941; M.D. 1943, Mayo Clinic, Rochester, Minn.

LOOSE, WILLIAM DAVID, U. of Pa., M.D. 1942, Mayo Clinic, Rochester, Minn.

OTSEN, ALEX JOHN, Northwestern U., M.B. 1936; M.D. 1937, 404-5 First Nat. Bk., Grand Forks, N. D.

SICHER, WILLIAM DAVID, Rush Med. Co., M.D. 1940, Mayo Clinic, Rochester, Minn.

SIMMONS, DONALD RAY, Wayne U., M.D. 1943, 2024 Commonwealth Ave., St. Paul, Minn.

STRONG, MUNRO LAWRENCE, Creighton U., M.D. 1935, Mayo Clinic, Rochester, Minn.

National Board Credentials

BLANK, SAMUEL, Med. Col. of Va., M.D. 1941, University Hospital, Minneapolis 14, Minn.

KNOLL, WILLIAM VALENTINE, Col. of Med. Evang., M.D. 1935, St. Mary's Hospital, Duluth, Minn.

LOMBARDI, ALFONSO A., U. of Buffalo, M.D. 1943, Mayo Clinic, Rochester, Minn.

MACY, JR., DOROTHY, Woman's Med. Col. of Pa., M.D. 1944, Mayo Clinic, Rochester, Minn.

MORRIS, BENJAMIN HENRY, Cornell U., M.D. 1943, 1009 Nicollet Ave., Minneapolis 2, Minn.

OLSEN, GERTRUDE EMILY, Col. of Med. Evang., M.D. 1937, Georgetown, Minn.

REMINGTON, JOHN HOWARD, U. of Buffalo, M.D. 1939, Mayo Clinic, Rochester, Minn.

VON LEDEN, HANS VICTOR, Loyola U., M.D., 1942, Mayo Clinic, Rochester, Minn.

In Memoriam

GILBERT LESLIE GOSSLEE

On Sunday morning, July 15, 1945, one of our honored and respected members, Dr. Gilbert Leslie Gosslee of Moorhead, passed on.

"Gil", as he was lovingly called, practiced medicine in Moorhead 32 years. He was born in Hazleton, Minnesota, in 1877; attended the public schools in Tracy before enrolling as a student in the Hamline University Medical School. He later studied in Vienna.

Dr. Gosslee was a Mason, a Kiwanian and a Fellow of the American College of Surgeons. In World War I he was a member of the U. S. Medical Corps with the rank of Captain.

For ten years he was resident Director of the State Teachers College at Moorhead and at the time of his death was the eighth Councilor District representative on the State Procurement and Assignment Board.

His son John is a Captain in the U. S. Army Medical Corps and stationed in Italy; Lt. David is in North Africa; Private 1st Class Mildred at Kelly Field, Texas.

"Gil", true to the Scotch tradition, was unostentatious, unspeakably sincere, self-respecting. He was the soul of honor—tolerant and professionally ethical—above any whisper of suspicion concerning his moral and personal integrity.

His family life was singularly happy—consistent with his high idealism and profound moral consciousness.

All in all, he was a public-spirited patriotic citizen and personified the high ideals of an honorable guild.

O. J. HAGEN, M.D.

VITAL STATISTICS RECORDS NEED CLARIFICATION

Since the 1945 Legislature and Chapter 393 of the Session Laws has provided that the official time of the State shall be Central Standard Time and forbids any Department of the State to employ any other time or adopt any other providing for another time, it follows that the time stated on birth and death certificates should be Central Standard Time.

But because it might be possible that regardless of this law the time recorded in such certificates will be based upon Central War Time, it is especially necessary that in all cases the word Central "Standard" Time or Central "War" Time, as the case may be, should be added to the Birth or Death certificates. These added words should be written out in full.

Minnesota Academy of Medicine

Meeting of May 9, 1945

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, May 9, 1945. Dinner was served at 7 o'clock and the meeting was called to order by the President, Dr. A. G. Schulze, at 8:10 o'clock.

There were fifty-five members and two guests present. Minutes of the April meeting were read and approved. The scientific program followed.

THE VALUE OF THE STERNAL PORTION OF THE BONE MARROW IN DIAGNOSIS

EMIL MARO SCHLEICHER[†] and GEORGE FAHR, M.D.
Minneapolis, Minnesota

The sternal portion of the bone marrow organ is a reticulo-endothelial structure containing fat, hemopoietic islands and a rich supply of blood vessels, among which the sinuses are very important. In these sinuses the blood flows slowly and intermittently in consequence of which particulate matter can sediment out readily. The reticulum furnishes a rich source of macrophages which engulf sedimented matter. One would say a priori that this organ would be a rich field for metastases and for the phagocytosis of small parasites circulating in the blood, and one would also expect this primitive reticulum from time to time to give rise to malignant lesions.

This evening I am going to show a few cases which illustrate the value of bone marrow studies in diagnosis. We have selected nine cases from a large material studied at the Minneapolis General Hospital for the past four years. My purpose this evening is to introduce to you some of the types of diagnoses that can be made by this method and to stimulate your interest in it so that you may from time to time make use of our facilities in helping you in your diagnoses and at the same time helping us in the evaluation of the method. This method presupposes the co-operation of a cytologist or pathologist competent in the field of bone marrow diagnosis. In the paper this evening, I wish to say that I (G. F.) am to be considered only the promotor of the work. The technical skill and the cytological understanding which have made this work possible are to be credited to the other author (E. M. S.).

Case Reports

Case 1.—Multiple Myeloma. This seventy-six-year-old man was admitted on January 23, 1945, and died on January 31, 1945. He came in with a presenting com-

From the Department of Medicine, University of Minnesota and the Minneapolis General Hospital.

†Parke, Davis Fellow in Clinical Hematology.

plaint of pain in the epigastrum radiating to the left flank, loss of weight, incontinence of urine and feces, and weakness. Physical examination was negative excepting for a marked tenderness to palpation in the left epigastric region extending along the left costal margin and to the left flank.

Laboratory examination showed an anemic state: hemoglobin of 66 per cent red count 3,200,000, and leukocyte count 3,900. The technician noted rouleau formation in the blood smears. The serum albumin was 4.6 and the globulin 3.9 grams per cent. The x-ray examination of lungs, long bones and skull was said to be negative. A bone marrow aspiration was done. Sections of marrow units showed the normal bone marrow replaced by so-called "plasma cells" (myeloma cells). These pathologic cells have an eccentrically placed nucleus with irregularly condensed chromatin and various sized nucleoli. The cytoplasm is abundant, of a sky-blue color with Wright's stain and is somewhat mottled in appearance (Fig. 1). Bence-Jones protein is not found in the urine at this developmental stage of the neoplasm. This next photomicrograph in color shows the reddish rhomboid and pencil-like crystals of globulin in the sky-blue cytoplasm (Fig. 2). This is from another one of our cases of multiple myeloma in which Bence-Jones protein was found in the urine. When these crystals are found in the myeloma cells, the urine very frequently shows Bence-Jones protein. The x-ray of the left scapula shows three small round areas of rarefaction diagnosed as probable myeloma rarefactions after the diagnosis by bone marrow study had been made. Autopsy showed these to be myelomata tumors in the scapula. The marrow in the long and flat bones consisted chiefly of myeloma tumor tissue.

Case 2.—Reticulo-endothelioma. Mycosis Fungoides. This fifty-one-year-old woman came into the Minneapolis Hospital on May 17, 1943, because for the past three weeks she had noticed progressively increasing weakness, night sweats, dyspnea on the slightest exertion, and a yellow tint to her skin. In addition she noticed swelling of the face and ankles. There was nausea and anorexia. Previous history is of no significance.

Physical examination revealed an anemic well-nourished female, with a slightly yellow tint to her skin. Liver enlarged to 3 cm. below the right costal margin in the right medio-clavicular line. Liver edge seemed a little rounded but no nodules were felt on the surface of the liver.

The patient ran an intermittent fever rising to 100-101 every day. X-rays of the gastro-intestinal tract and chest were negative. Hemoglobin was 24 per cent, red count was 1,100,000 and leukocyte count 2,250. The blood smear showed 8 per cent of undifferentiated reticulum cells. A bone marrow aspiration was done the same day. The gross marrow units were slightly larger than the normal. Imprint preparations showed many late pronormoblasts, with the basophilic normoblasts predominating. Mitosis was prominent. The majority of the erythrocytes were macrocytic. A severe hypoplasia of myeloid tissue was noted. An occasional myeloblast, some promyelocytes, and a few neutrophilic myelocytes and a few segmented neutrophiles were observed. A few megakaryocytes were seen. A preponderance of undifferentiated reticulum cells ranging in size from 6 to 15 microns was a dominant feature of the smear preparations. There were small reticulum syncytia com-

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posed of from three to seven cells. The nucleus of the large reticulum cells showed a tendency toward lobulation and some had two to three nuclei. There was no tendency of these rounded up reticulum cells to differentiate toward any particular type of marrow cells. Mitosis among

One mitotic figure in the late telophase stage was seen. There were about 65 to 70 per cent lymphocytes and about 34 to 26 per cent neutrophiles seen in the smear. One of the nodules was biopsied and the pathologist's report was "section is covered by a thin layer of strati-

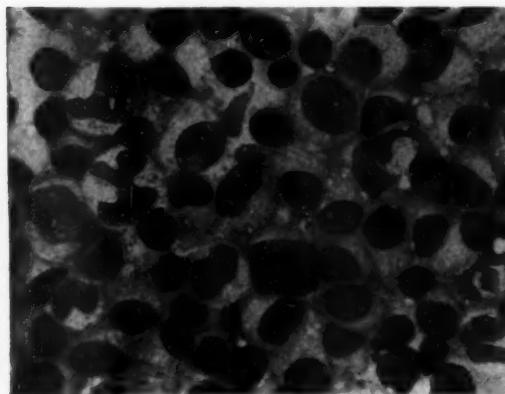


Fig. 1. Bone marrow imprint showing syncytium of myeloma cells (plasma cells) in various stages of development.

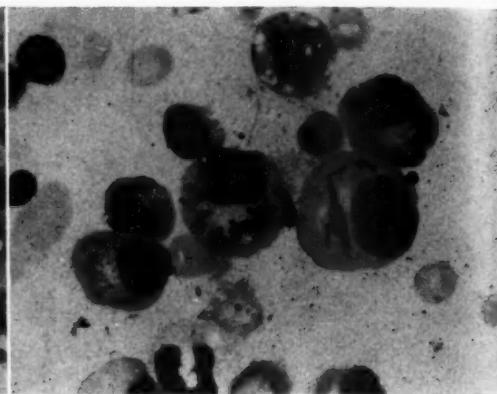


Fig. 2. The large black dots and rod-like inclusions in the cytoplasm of these myeloma cells are the globulin crystals.

these cells was frequent. The impression is gained that the cells are derived from a well advanced undifferentiated malignant lymphoblastoma (reticulo-endothelioma) of the bone marrow organ. Because this type of lesion is seemingly rare, we suggested that this patient should be followed closely in order to establish, if possible, the character of the terminal stage of this lesion. Impression: "Advanced undifferentiated malignant lymphoblastoma or reticulo-endothelioma of the bone marrow organ."

Final diagnosis: Reticulo-endothelioma of the bone marrow organ.

We were satisfied that this was a reticulo-endothelioma or possibly leukemic state of the reticulo-endothelial system. The patient seemed to improve on small transfusions and daily liver injections of 1 c.c. intramuscularly, and on June 21 she was discharged with a hemoglobin of 80 per cent, R.B.C. 3,900,000, W.B.C. 3,000.

About five weeks after she left the Minneapolis General Hospital she returned to the out-patient department with chills and fever, and a reddened, mildly edematous infiltration around the right eye. She was again admitted to the hospital on September 24 at which time a mass was noticed anterior to the left ear in the region of the parotid gland about 3 cm. in diameter. From this time on, she developed nodules which came and went on her face and body. These nodules would sometimes itch. At times they looked like urticaria nodules; at other times they were said to resemble the nodules of mycosis fungoidea. She was sent to the dermatological clinic where some of the dermatologists thought this was mycosis fungoidea. She finally came into the hospital on January 22 because she had noticed many hard nodules over her face and scalp and the chest, back and abdomen. These were not sore. The nodules varied from 0.5 cm. to 1.5 cm. in diameter and there were at times as many as thirty of these nodules scattered over her body. They were most numerous over the scalp, face, and neck. One was noted to develop over night.

At this admission her hemoglobin was 42 per cent, the red count was 1,500,000, and the leukocytes were 1,900. The blood smear showed an occasional cell showing the characteristics of reticulo-endothelial cells.

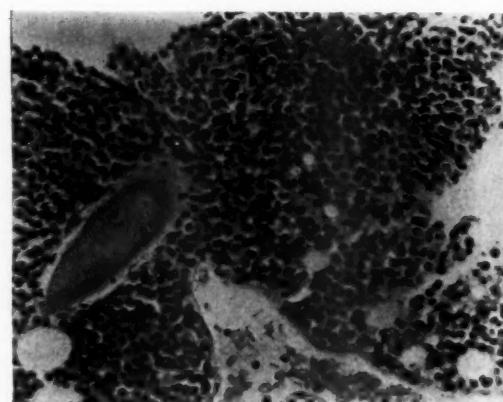


Fig. 3. Section of a marrow unit showing on the left a trabecula and in the lower part of the figure a sinus with a few of the malignant cells in the sinus. The normal structure of the bone marrow unit is almost completely replaced by the malignant reticulo-endothelial cells.

fied squamous epithelium. Beneath this the entire tissue is replaced by elongated vesicular cells which in some areas are dark-staining. There is some fibrosis." Diagnosis: "Malignant Lymphoblastoma." The diagnosis of the medical department was reticulum cell sarcoma (reticulo-endothelioma). This slide shows the numerous skin nodules. The second slide is a section of a sternal marrow unit showing the normal bone marrow replaced by a syncytium of cells with round, oval or indented nuclei with prominent nucleoli and narrow clear cytoplasm. The cells arise directly from the reticulum. There is a bone trabeculum and a large sinus in which a few of these malignant cells can be seen. On this day we found mitotic figures in immature reticulo-endothelial cells in the peripheral circulation (Fig. 3). The third slide shows an imprint of a marrow unit. The cells are

MINNESOTA ACADEMY OF MEDICINE

stained with Wright's stain. The nuclei are deeply stained; the nucleoli are conspicuous. The bluish cytoplasm is narrow and mottled in appearance.

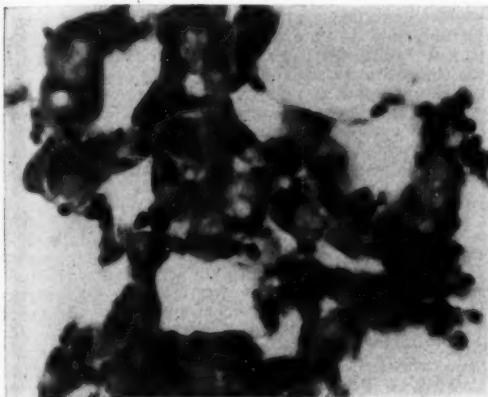


Fig. 4. Section of bone marrow unit showing a syncytium of secreting adenocarcinoma cells (signet ring cells).

Case 3.—Adeno-carcinoma of Stomach. This sixty-nine-year-old woman was known to have had pernicious anemia for at least eight years, during which time she was followed in the Minneapolis General Hospital pernicious anemia clinic. For many months this patient has had a gradual reduction in her hemoglobin and red cell count, despite *lege artis* treatment and she came in because she felt weak and tired. Examination of the bone marrow showed the following: The megaloblastic pattern characteristic of pernicious anemia is difficult to make out. Cells which look like signet ring cells filled with mucin form a syncytium. These cells are characteristic of metastases to the bone marrow from carcinoma of the gastro-intestinal tract (Fig. 4). The patient developed a large mass in the epigastric and x-ray evidence of carcinoma of the stomach. She refused operation. It is easily seen why it is almost impossible to produce remissions in pernicious anemia when the bone marrow is invaded by carcinoma metastases.

Case 4.—Pernicious anemia complicated by Miliary Tuberculosis of Bone Marrow. This sixty-year-old woman came into the hospital in a semi-comatose condition with symptoms of heart failure and the physical findings of a pneumonia in the left lower lobe. Hemoglobin was 18 per cent, red cell count 425,000, leukocytes 4,000, neutrophiles 56 per cent, lymphocytes 44 per cent. There was 0.2 per cent reticulocytes. Thrombocytes were 98,000 per cubic millimeter. The mean corpuscular diameter was 9.6 microns. There was an icterus index of 20 and an indirect VandenBergh of 2.4 mgm. and a total bilirubin of 3.9. A probable diagnosis of pernicious anemia was made. A sternal aspiration was done for confirmation of the clinical diagnosis.

The gross marrow units were larger than normal. Imprints of marrow units showed promegaloblastosis which is the safest diagnostic criteria of pernicious anemia. Histological preparation of marrow units showed a small epitheloid tubercle located near a sinus in one marrow unit. Because of poor response to adequate anti-anemia therapy another sternal aspiration was performed. Histological preparations showed tubercles in 8 marrow units out of 100. Seven of these were hard tubercles as shown on the screen. One sees three Lang-

hans giant cells imbedded in epitheloid cells. A conspicuous ring of lymphocytes is present. This is a hard tubercle without caseation. The next photomicrograph

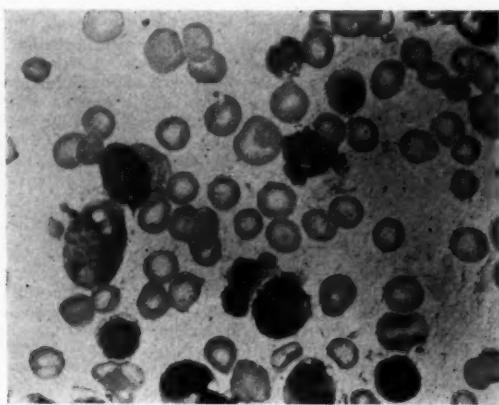


Fig. 5. Near the center and upper end of this figure, one can see the mature stage of a schizont within a red blood cell. There are approximately eighteen nuclei seen in this parasite. To the left and a little below center, one sees a large macrophage which has engulfed three red cells with the plasmodes in the mature schizont stage. In the lower right corner is an early trophozoite in a red blood cell.

shows a soft tubercle from the same bone marrow. There is one Langhans giant cell. The cased area in the center is surrounded by lymphocytes. Tubercle bacilli were demonstrated in the cased material of this tubercle. Chest x-ray showed a healed Ghone tubercle but no evidence of an active tuberculous process. Gastric washings yielded acid-fast bacilli. The patient was discharged with diagnosis of pernicious anemia and miliary tuberculosis of the bone marrow organ. Her chest x-rays five months after discharge were reported showing no tuberculous process. Peripheral blood was found to be still below normal levels in spite of adequate anti-anemia therapy. The patient is still alive and showing no symptoms of tuberculosis.

Case 5.—Carcinoma of the Lung. This seventy-one-year-old patient came into the hospital because of pain in the left shoulder and hips, weakness and tiredness. Physical examination was negative excepting for an anemic appearance and a tendency to shortness of breath.

The hemoglobin was 30 per cent, the red count was 1,500,000, and the leukocytes were 14,700, with 84 per cent neutrophiles. Smear was of no importance in diagnosis. X-ray of the chest showed a density in the right lung field. An atypical pneumonia process was considered. No areas of metastases could be demonstrated. The left diaphragm was slightly elevated. X-ray conclusions: Questionable pneumonia, right lung.

This section of a bone marrow unit shows a syncytium of carcinoma cells, resembling squamous cells, apparently extending through the wall of a primitive blood vessel.

Bone marrow diagnosis was metastatic carcinoma.

Clinical diagnosis was unexplained anemia, malignancy possibly in lung. Temperatures ran from 101 to 104. The patient died after five days in the hospital. A postmortem examination in the department of anatomy later showed bronchogenic carcinoma of the right lung.

Case 6.—Malaria Treatment with No Response. This sixty-one-year-old patient was sent into the hospital for malaria treatment of general paresis. He was given

MINNESOTA ACADEMY OF MEDICINE

10 c.c. of a citrated blood from a patient under malaria treatment at the University of Minnesota on the afternoon of July 26, 1943. No chills were obtained and on August 9 malarial blood 20 c.c. was given without the usual response with chills and fever.

Examination of the bone marrow revealed active phagocytosis of plasmodia in the fresh specimen. This photomicrograph of an imprinted marrow unit shows one red cell with plasmodium vivax in the morula stage and one reticuloendothelial cell which has engulfed three red cells with plasmodium vivax in the morula stage (Fig. 5). This active phagocytosis seen in the bone marrow suggests the hypothesis that this may be responsible for the lack of response in this case.

Case 7—Gaucher's Disease. This seventy-nine-year-old man came into the hospital on February 26, 1942, with a history of generalized weakness, headache, anorexia and cough, poor appetite, shortness of breath. He had lost ten pounds in the week previous to admission and his skin had become very pale with some slight yellow tint. Examination revealed 1+ edema of the ankles, some tenderness in the right upper quadrant and palpable liver. X-ray showed cardiac enlargement, some pulmonary congestion and pleural fluid on the right side. Patient was put on a cardiac régime.

Hemoglobin was 33 per cent, R.B.C. 2,000,000; leukocytes 9.500; nothing noteworthy in the differential. The icterus index was 14 and the Van den Berg was direct immediate 1 mg. per cent and direct delayed 4 mg. per cent. Sternal marrow was aspirated, as is usual in this hospital when we have an unexplained anemic state. There was a marked hyperplasia of the myeloid elements and numerous eosinophiles were present. Myeloid cells showed various degrees of degenerative changes. The lymphocytes were reduced in number. There were many plasma cells. There were a small number of histiocytic mesenchymal cells. A conspicuous number of foam cells were present. These elements showed the characteristic morphology of Gaucher's cells. A diagnosis of lipid histiocytosis, "Gaucher's disease" of the bone marrow, was made. A tentative diagnosis of Gaucher's disease having been made, x-rays of the femurs were obtained and these were submitted to Dr. Leo Rigler of the University of Minnesota who said it was his opinion that there might be some rarefaction in the intercondylar portion of the femurs but he didn't think there was any definite evidence or any other evidence of pathologic rarefaction in the bones.

The patient died on March 4 and an autopsy was performed. Microscopic examination showed "Gaucher-like" cells present in small groups in a lymph node. Spleen weighed 100 grams and showed occasionally Gaucher-like cells. Liver weighed 1140 grams and showed no specific pathology. Marrow from long and flat bones was obtained. Gaucher-like cells were scattered throughout. The marrow of the flat bones was practically replaced by Gaucher's cells. Pathological diagnosis was: Gaucher's disease; bronchopneumonia; benign hypertrophy of prostate; hydrocele, left; coronary sclerosis; myocardial fibrosis; pleural effusion, bilateral; focal necrosis of liver; emphysema of lungs.

Case 8.—Hypernephroma. A man, aged fifty-three, was admitted on January 31, 1944, with a complaint of pain in the left lower quadrant, burning on urination, chills, fever, nausea and vomiting, and cough. This man had a hypernephroma removed in 1938. The x-ray showed "a density extending out from the left root superimposed upon the pulmonic vessels which had the appearance of a rounded mass and also an homogenous density extending out from the right root into the parenchyma of both lungs. There is an interlobar pleurisy between the middle and the upper lobe." X-ray stated the exact nature of the density could not be determined from that examination. "Pleural thickening might be

responsible for part of this change but pneumonic process must also be considered. Would like lipiodal study of the right lung, also fluoroscopy to determine the nature of the mass at the left root and also a right lateral. Could be metastases." After a bronchogram was made with lipiodal, it was stated that no conclusions could be reached. There was a slight anemia present. Nothing else of note in the laboratory work-up. The patient ran a fever around 101 for four days; then the temperature became normal.

This photomicrograph is of an imprint of a bone marrow unit showing a syncytium of seven cells with hydropic cytoplasm, darkly staining nuclei of uniform size and sky blue staining cytoplasm. The cells show the morphology characteristic of hypernephroma cells.

Case 9.—Refractory Pernicious Anemia. Fatty metamorphosis of liver and bone marrow organ. Choline chloride therapy brought anemic state into remission. This is the case of a patient with pernicious anemia who responded characteristically for years to liver extract. He then developed a sensitivity to liver extract and could not be desensitized. He developed a jaundice with enlarged liver several days after an injection of purified liver extract. There was nausea, vomiting and itching, dark brown urine, light colored stools, enlarged liver and icterus. Needle biopsy of the liver showed fatty metamorphosis as seen in this photomicrograph. This section of a sternal marrow unit shows many large fat cells and general hypoplasia of the active marrow. Promegaklasts characteristic of pernicious anemia in relapse are present. There was a progressive deterioration of the blood status. Then 20 c.c. of a 5 per cent choline chloride solution was given intravenously for sixteen days. At this time the liver resumed a nearly normal morphology as seen in this photomicrograph. The next photomicrograph shows a section of a sternal marrow unit after treatment with choline, you can see that the promegaklasts have disappeared, many normoblasts are present, the fat cells have become less in number, the general pattern is that of a hyperplastic unit indicating a remission of the pernicious anemia without supporting liver extract therapy. This slide shows a graph of the peripheral blood status before, during and after choline chloride therapy. Note that the peripheral blood levels were normal when the patient was discharged from the hospital. A detailed report of this case is in press.

These nine cases which are selected from a very large series will serve to call attention to the value of bone marrow studies in diagnosis. We hope they will serve to stimulate many other investigators to study this organ as a source of information in diagnostic problems, to the end that we may soon have an evaluation of its importance.

Discussion

DR. E. T. BELL, University of Minnesota: In regard to pernicious anemia, we have learned over the years that a patient with pernicious anemia is very prone to develop carcinoma of the stomach. It is only during the last few years that we have learned how often this occurs. The procedure that is being adopted now in a number of our clinics is to bring the patient in every six months for x-rays of the stomach. I think this is a good idea because you may then get the cancer in an early stage. Carcinoma develops even when the patient is under successful management. The primary trouble in pernicious anemia is an atrophy of the mucosa of the stomach. This atrophic stomach is more likely to develop carcinoma than a normal stomach. The only way to find carcinoma in an operable stage is to examine the stomach every six months or so by x-ray.

MINNESOTA ACADEMY OF MEDICINE

I want to show a few microscopic slides to illustrate some of the diseases that can be recognized in the sternal bone marrow:

1. Normal bone marrow from the sternum.
2. Carcinoma metastasis in the marrow.
3. Bone marrow biopsy from a case of multiple myeloma showing plasma cells.
4. Patient with severe anemia. Biopsy of marrow showing normoblastic regeneration; this excludes pernicious anemia.
5. Typical pernicious anemia in an exacerbation; most of the marrow is replaced by megaloblasts.
6. Acute leukemia; marrow replaced by young cells; you know from that it is leukemia.
7. Chronic lymphatic leukemia.

Examination of the sternal marrow is a most useful diagnostic procedure. Of course it won't settle all your problems but it will settle some of them. Just recently miliary tuberculosis was found by studying the marrow.

DR. FAHR: This miliary tuberculosis case has gone three months now and the patient has not developed any tubercles in the lung. We don't know what is going to happen there. You will see some very interesting things about miliary tuberculosis in Schleicher's work.

DR. S. E. SWEITZER, Minneapolis: The case of reticuloendotheliosis was shown at the Minnesota Dermatological Society. One of the most interesting things about this case was that the lesions developed so rapidly; she had tumors that you could see grow from day to day. The destruction of the malaria parasites in the bone marrow was of interest. I wonder if this could explain the difficulty in inoculating the colored people with malaria. This should be looked into.

DR. H. E. MICHELSON, Minneapolis: The group of diseases that are included under the term lymphoblastoma interests us very much because we as dermatologists often see skin lesions which at first are not distinguishable, one from the other. However, I do not believe that the etiology of the lymphoblastomas is a single one, nor that the variations are mutations. I believe that mycosis fungoides, leukemia, etc., however, are single diseases, but we are unable to differentially diagnose them at their inception. Unfortunately, we use the word atypical, which merely means we are not certain. I think that the bone marrow studies of Dr. Fahr are very valuable, and this form of examination may throw considerable light on many obscure studies. I would like to ask Dr. Bell how he knows there is metastasis?

DR. BELL: A metastasis is merely a tumor not connected with the primary lesion. If you have a case of carcinoma of the prostate and there is a growth anywhere else, that is a metastasis from the original growth.

DR. MICHELSON: How do you know it comes from that?

DR. BELL: We believe that nearly all carcinomas originate in a single focus. I don't think we would entertain the idea that cells in the marrow would change into carcinoma. In regard to these malignant lymphoblastomas that Dr. Michelson referred to, this diagnosis is justified when we cannot determine the type of lymphoblastoma. I am willing to take the dermatologist's diagnosis of mycosis fungoides. I think that is a good name for a lymphoblastoma with the major involvement in the skin. The histology of mycosis is sometimes like reticulo-sarcoma; it is never like leukemia. On biopsy of the skin it is seldom possible to say which one of these malignant diseases it is; practically it doesn't make so very much difference as they all amount to about the same thing. In a biopsy

of Hodgkin's disease you nearly always get the diagnosis from a lymph node but not from the skin. We haven't had much luck with bone marrow in Hodgkin's. If we had a real biopsy of bone marrow and not an aspiration, we could probably then make the diagnosis more often. A very large number of malignant tumors metastasize to the bone marrow. In regard to malaria, I am wondering if sternal biopsy may not be useful in the diagnosis of latent malaria in returning soldiers.

DR. E. M. HAMMES, Saint Paul: I would like to ask Dr. Fahr if he can advise us regarding patients suffering from general paresis who have been inoculated with malaria and do not develop a malarial reaction. When these patients are given triple typhoid vaccine intravenously, which will produce a definite temperature reaction, they occasionally begin to have a typical malaria reaction. I would also like to know why patients suffering from general paresis given malaria taken from another patient respond so quickly to small doses of quinine and the malaria apparently is cured.

DR. FAHR: The first question I am not going to say anything about. As to the second question, you know we do not inoculate sporozoites when we inoculate with a patient's blood into another patient but we inoculate with the schizont stages or trophozoites. These stages of the malaria parasite are very susceptible to quinine, whereas the sporozoites and any stage between the sporozoite and trophozoite is not susceptible to any high degree. The sporozoites may lie dormant in reticuloendothelial or other tissues for a long time. Until they all die out, relapses are possible. Whereas if only the trophozoites are present they are killed by quinine and no relapses are possible.

These are only guesses but it helps me explain some things about the difference in mosquito transmitted malaria and malaria transmitted by human blood.

DR. BELL: I have examined these cases of inoculated malaria and found the same stages of the parasite as are found in malaria transmitted by mosquitos. I do not know why the inoculated malaria has less tendency to relapse.

DR. BEN SOMMERS, Saint Paul (by invitation): Sternal biopsy helps in the management of another disease not mentioned tonight, i.e., thrombocytopenic purpura. If study of the marrow reveals a large number of megakaryocytes, splenectomy will usually be indicated. If these cells are greatly diminished in number, splenectomy is contraindicated.

Occasionally sternal biopsy will fail to yield bone marrow even on repeated aspiration in more than one location. Two conditions may be responsible for this failure, marked atrophy of the marrow as seen in cases formerly labeled aplastic anemia, and in destruction of the normal marrow and replacement by certain forms of metastatic carcinoma.

The meeting adjourned.

J. A. LEPAK, M.D., *Secretary*

To whatever school of social philosophy one belongs, the fact remains that it is the private physician who sees the largest number of persons in need of medical counsel. The physician knows by training and experience that the early manifestations of pulmonary tuberculosis are protean. A good percentage of his patients have one or more of these symptoms. Many others deserve x-raying on general principles because of physiological states conducive to activation of tuberculosis.—WILLIAM COURTNEY DOUGLASS, M.D., NTA Bull, May, 1945.

CONSTRUCTIVE PROGRAM FOR MEDICAL CARE

AMERICAN MEDICAL ASSOCIATION

This platform was adopted by the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association on June 22, 1945.

Preamble

The physicians of the United States are interested in extending to all people in all communities the best possible medical care. The Constitution of the United States, the Bill of Rights and the "American Way of Life" are diametrically opposed to regimentation or any form of totalitarianism. According to available evidence in surveys, most of the American people are not interested in testing in the United States experiments in medical care which have already failed in regimented countries.

The physicians of the United States, through the American Medical Association, have stressed repeatedly the necessity for extending to all corners of this great country the availability of aids for diagnosis and treatment, so that dependency will be minimized and independence will be stimulated. American private enterprise has won and is winning the greatest war in the world's history. Private enterprise and initiative manifested through research may conquer cancer, arthritis and other as yet unconquered scourges of humankind. Science, as history well demonstrates, prospers best when free and unshackled.

Program

The physicians represented by the American Medical Association propose the following constructive program for the extension of improved health and medical care to all the people:

1. Sustained production leading to better living conditions with improved housing, nutrition and sanitation which are fundamental to good health; we support progressive action toward achieving these objectives:
2. An extended program of disease prevention with the development or extension of organizations for public health service so that every part of our country will have such service, as rapidly as adequate personnel can be trained.
3. Increased hospitalization insurance on a voluntary basis.
4. The development in or extension to all localities of voluntary sickness insurance plans and provision for the extension of these plans to the needy under the principles already established by the American Medical Association.
5. The provision of hospitalization and medical care to the indigent by local authorities under voluntary hospital and sickness insurance plans.
6. A survey of each state by qualified individuals and agencies to establish the need for additional medical care.
7. Federal aid to states where definite need is demonstrated, to be administered by the proper local agencies of the states involved with the help and advice of the medical profession.
8. Extension of information on these plans to all the people with recognition that such voluntary programs need not involve increased taxation.
9. A continuous survey of all voluntary plans for hospitalization and illness to determine their adequacy in meeting needs and maintaining continuous improvement in quality of medical service.
10. Discharge of physicians from the armed services as rapidly as is consistent with the war effort in order to facilitate redistribution and relocation of physicians in areas needing physicians.
11. Increased availability of medical education to young men and women to provide a greater number of physicians for rural areas.
12. Postponement of consideration of revolutionary changes while 60,000 medical men are in the service voluntarily and while 12,000,000 men and women are in uniform to preserve the American democratic system of government.
13. Adoption of federal legislation to provide for adjustments in draft regulation which will permit students to prepare for and continue the study of medicine.
14. Study of postwar medical personnel requirements with special reference to the needs of the veterans' hospitals, the regular army, navy and United States Public Health Service.



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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

♦ Of General Interest ♦

A former fellow in medicine of the Mayo Foundation, Dr. William Calvert Chaney, has been elected president of the Tennessee Medical Association for 1945-46.

* * *

Dr. Arthur Sanford, Mayo Clinic, assisted with the examinations for the American Board of Pathology held in Philadelphia in June.

* * *

Dr. John Aubrey Phillips, Hibbing, who received his degree from Loyola University on June 23, is interning at St. Ann's Hospital in Chicago.

* * *

Drs. F. H. Dubbe and Albert Frische were returned to office, and Dr. H. T. Hammermeister was elected for a first term, on the Board of Directors for Union Hospital in New Ulm, at the recent annual election.

* * *

Major L. H. Mousel, formerly of the Mayo Clinic, has been appointed Consultant in Anesthesiology to the Office of the Surgeon General of the United States Army.

* * *

Dr. Charles W. Rogers, physician and surgeon at the Heron Lake hospital for the past seven years, has re-

signed to continue his study of children's diseases under a fellowship at the Minneapolis General Hospital.

* * *

Lieutenant Colonel S. B. Lovelady, formerly of the Mayo Clinic, has been made a fellow of the Royal Society of Medicine of England. Lieutenant Lovelady has been stationed in the British Isles for the past year.

* * *

Colonel R. B. Kirklin, Mayo Clinic, is now on active duty in Washington, D. C., where he is serving as senior consultant in radiology to the Surgeon General of the United States Army.

* * *

Dr. H. A. Albrecht, who was recently appointed associate physician on the staff of the hospital at St. Croix Falls, has purchased a house at Taylors Falls and moved his family there from their former home in Floodwood.

* * *

Bronze stars have been awarded to Lieutenant Colonel C. K. Maytum and Lieutenant Colonel J. T. Priestly for meritorious service in the New Guinea and the Netherlands East Indies campaigns. Both physicians were formerly associated with the Mayo Clinic.

(Continued on Page 678)

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OF GENERAL INTEREST

OF GENERAL INTEREST

(Continued from Page 676)

Dr. Viktor Wilson, Director of Child Hygiene at the University of Minnesota, was guest speaker at the annual meeting of the stockholders of the hospital in Kelliher. "Community Health, Medical and Hospital Services" was the subject of Dr. Wilson's address.

* * *

Dr. Paul O'Leary, Mayo Clinic, attended the meeting of the Consultant Staff of the Dermatoses Investigative Committee of the United States Public Health Service held at Bethesda, Maryland. Dr. O'Leary is chairman of the committee.

* * *

Dr. George A. Williamson, formerly of St. Paul and recently discharged from the army medical service, has opened an office at 910 Professional Building, Phoenix, Arizona, for the practice of diseases of the bones and joints.

* * *

Dr. Charles Albert Haberle, Jr., a 1945 graduate of the University of Minnesota Medical School, has been commissioned a lieutenant and will enter the Army Medical Corps when he has completed his internship at the Minneapolis General Hospital.

* * *

Announcement has been made of the appointment of Captain Howard K. Gray, former associate professor of medicine at the Mayo Foundation Graduate School of Medicine, as chief of surgery at the Naval Hospital in San Diego, California.

* * *

Major A. B. C. Knudson, MC, has been transferred to Veterans Administration, Central Office, Washington, D. C. At the present time he is doing some research work at Cambridge, Massachusetts. He was recently elected to membership in the American College of Physicians.

* * *

Announcement has been received of the marriage of Miss Jeanette Kraemer, a student at the University of Minnesota School of Medicine, to Dr. Paul Thorpe Lowry, of Cambridge, Massachusetts, on June 25. They will make their home in San Francisco, where Dr. Lowry, who graduated from Harvard this spring, will serve his internship at the City and County Hospital.

* * *

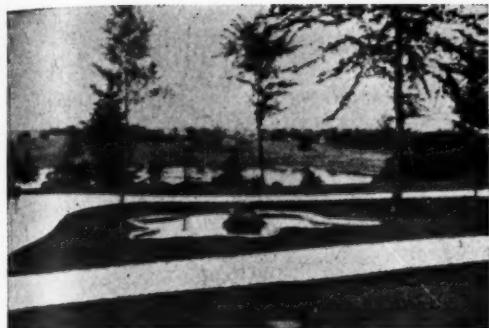
Dr. Douglas L. Johnson, Little Falls, is this year's winner of the president's cup—a trophy presented annually to residents of Little Falls in recognition of outstanding civic activities. In making the award, the committee specifically mentioned Dr. Johnson's work as co-chairman of the Red Cross campaign, chairman of the Jaycees aviation committee, and his election to the Board of Education.

(Continued on Page 680)

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OF GENERAL INTEREST



OF GENERAL INTEREST

(Continued from Page 678)

The Minnesota Cancer Society has announced the election of Dr. Arthur W. Wells to the vacancy of first vice president, caused by the death of Dr. Max Alberts.

Dr. Wells is head of the department of pathology at St. Luke's Hospital in Duluth and he is chairman of the cancer committee of the Minnesota State Medical Association.

* * *

Lieutenant (jg) Austin M. McCarthy, now serving on the U. S. Hospital Ship "Relief," has been especially commended by his chief surgeon, Commander W. J. Sheehan, for his share in the evacuation of the more than 3,000 wounded from Okinawa.

Lt. McCarthy, whose home is in Watkins, was a member of the staff of St. Andrews Hospital in Minneapolis at the time of his induction into service about a year ago.

* * *

Captain Howard K. Gray, formerly of Rochester and now serving as chief in surgery at the U. S. Naval Hospital at San Diego, has been awarded the Navy Commendation Ribbon. Captain Gray was chief of the surgical service at the Navy Hospital, Area Heights, Hawaii between August, 1944, and May, 1945, and received commendation for "devotion to duty, able leadership in co-ordinating the surgical service at the hospital, and superior skill in his profession."

* * *

Dr. R. R. Hendrickson, who has been on a three years' leave of absence as surgeon in reserve in the United States Public Health Service, returned to his position as superintendent of the Sand Beach Sanatorium at Lake Park in July.

Dr. J. Nelson Ebwank, superintendent during Dr. Hendrickson's absence, has returned to his native State, Illinois, as director of the Outlook Sanatorium at Urbana and Champaign.

* * *

The annual meeting of the St. Louis County and Range Medical Associations was held in Virginia at the Eshquaguma Country Club on June 14. Delegates attended from Duluth, Hibbing, Chisholm, Eveleth, Virginia, Biwabik, Aurora, and Gilbert. A golf tournament was a feature of the afternoon, and the ladies were entertained at bridge during the evening.

Dr. H. O. McPheeters, Minneapolis, was guest speaker at the banquet. His subject was "Ligation and Injection Treatment of Varicose Veins."

* * *

The first medical officer to receive a discharge under the Army's point system is Major Wallace P. Ritchie of Saint Paul, who has amassed a total of 121 points. Taken completely by surprise, Major Ritchie received papers from The Surgeon General's Office within a few hours after he landed at Bolling Field in Washington

(Continued on Page 682)

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